



**US Army Corps
of Engineers®**

Engineer Research and
Development Center

Environmental Compliance Assessment Data: Analysis of Data Generated by the Army's ECAS Program

Donna J. Schell

March 2001

20010423 081

Foreword

This study was conducted for Headquarters, U.S. Army Corps of Engineers under project 622720A896, "Base Facilities Environmental Quality," Work Unit T20, "Compliance Data." The technical reviewer was Gary W. Schanche, Construction Engineering Research Laboratory (CERL).

The research was performed by CERL's Installation Division (CN), Environmental Processes Branch (CN-E). The Principal Investigator was Donna J. Schell (CN-E). The technical editor was Linda L. Wheatley, Information Technology Laboratory. Dr. Ilker Adiguzel is Branch Chief (CN-E) and Dr. John T. Bandy is Division Chief (CN). Gary W. Schanche is the associated Technical Director. William D. Goran is Acting Director of CERL.

CERL is an element of the U.S. Army Engineer Research and Development Center (ERDC), U.S. Army Corps of Engineers. The Director of ERDC is Dr. James R. Houston and the Commander is COL James S. Weller.

DISCLAIMER

The contents of this report are not to be used for advertising, publication, or promotional purposes. Citation of trade names does not constitute an official endorsement or approval of the use of such commercial products. All product names and trademarks cited are the property of their respective owners.

The findings of this report are not to be construed as an official Department of the Army position unless so designated by other authorized documents.

DESTROY THIS REPORT WHEN IT IS NO LONGER NEEDED. DO NOT RETURN IT TO THE ORIGINATOR.

Contents

Foreword.....	2
1 Introduction.....	7
Background	7
Objectives.....	7
Approach	7
2 Environmental Compliance Assessment System.....	10
Active Army.....	10
Army Reserve.....	10
Army National Guard	11
3 Summary of Findings and Recommendations.....	12
Trends Analysis	12
<i>Top 20 Findings of Noncompliance Across All Fiscal Years.....</i>	<i>12</i>
<i>Trends by Topic and Fiscal Year.....</i>	<i>16</i>
<i>Trends Across Topics.....</i>	<i>25</i>
Numeric Analysis of Findings	25
<i>Numbers of Findings.....</i>	<i>25</i>
<i>Positive Findings.....</i>	<i>26</i>
<i>Accuracy of Findings</i>	<i>26</i>
<i>Citations of Negative Findings</i>	<i>27</i>
Pollution Prevention Solutions.....	28
<i>No or Inadequate Characterization of Wastes (HW.10.1).....</i>	<i>28</i>
<i>Noncompliance With State and Local Wastewater Regulations (WA.3.1)</i>	<i>29</i>
<i>Noncompliance With State and Local Air Emissions Regulations (AE.3.1).....</i>	<i>31</i>
<i>Noncompliance With State and Local Drinking Water/Water Quality Regulations (WQ.3.1).....</i>	<i>31</i>
<i>Noncompliance With Other Federal Regulations Regarding Hazardous Materials (OSHA-based regulations pertaining to issues such as personal protection equipment [PPE] and eyewashes) (HM.2.1)</i>	<i>31</i>
<i>Noncompliance With State and Local Solid Waste Regulations (SO.3.1).....</i>	<i>31</i>
<i>Hazardous Waste Satellite Accumulation Point/Accumulation Point Limits Exceeded (HW.75.1)</i>	<i>32</i>
<i>Discharge of Oil Into or Upon Navigable Waters (PO.15.1).....</i>	<i>32</i>
<i>Inadequate or No Spill Containment and Cleanup Materials in POL Storage Areas (PO.20.1).....</i>	<i>33</i>
<i>Noncompliance With State and Local Hazardous Waste Regulations (HW.3.1).....</i>	<i>33</i>

<i>Noncompliance With Other Federal Regulations Regarding Water Quality (WQ.2.1)</i>	33
<i>Noncompliance With State and Local Storage Tank Regulations (ST.3.1)</i>	33
<i>Noncompliance With or Lack of State/Federal NPDES for Point Source Discharges (WA.10.1)</i>	33
<i>Discharges That Would Cause Pass Through or Interference at the POTW/ FOTW (WA.25.1)</i>	33
<i>Improper Storage of Compressed Gas Cylinders (HM.45.1)</i>	33
<i>Lack of "Used Oil" Label on ASTs (ST.125.1)</i>	33
<i>Lack of or Incomplete MSDSs (HM.1.2)</i>	34
<i>Inadequate Management and Organization of Paperwork (O5.1.2.A)</i>	34
<i>Inadequate Fire Protection for Flammable/Combustible Storage Areas (HM.35.9)</i>	34
<i>No or Incomplete Asbestos Survey (T2.1.3.A)</i>	34
Appendix A: Installations/Facilities Included in the Data Analysis.....	35
Appendix B: Definitions for Fields in ACCESS Database.....	40
Appendix C: Keyword Index	46
Appendix D: Trends by Legislative Authority	56
Appendix E: Top Three Findings Across Fiscal Years 1994–2000 by Topic for the Active Army.....	59
Appendix F: Top Three Findings in Each Fiscal Year by Topic for the Active Army (FY 1994–2000).....	77
Appendix G: Top Three Findings Across Fiscal Years 1991–1998 by Topic for the Army Reserve	100
Appendix H: Top Three Findings in Each Fiscal Year by Topic for the Army Reserve (FY 1991–1998)	104
Appendix I: Top Three Findings Across Fiscal Years 1997–1998 by Topic for Army National Guard.....	136
Appendix J: Top Three Findings in Fiscal Years 1997–1998 by Topic for the Army National Guard.....	140
Appendix K: Positive and False Positive Findings.....	145
Appendix L: Positive Versus Negative Findings.....	146
Appendix M: Positive Versus Negative Findings By Topic for the Active Army	148
Appendix N: Positive Versus Negative Findings By Topic for the Army Reserve	160

Appendix O:	Positive Versus Negative Findings By Topic for the Army National Guard.....	163
Appendix P:	Questionable Findings.....	165
Appendix Q:	Citations of Negative Findings	169
CERL Distribution		171
Report Documentation Page.....		172

1 Introduction

Background

The Active Army, Army Reserve, and Army National Guard have been conducting environmental compliance assessments since the late 1980s under the Environmental Compliance Assessment System (ECAS). No analysis of the data generated to date had been done until the project reported here. This report summarizes the methodology used for an analysis of the data and the results of that analysis.

Objectives

The objectives of this effort were to review the available Army environmental compliance assessment data to identify:

- Trends in environmental noncompliance
- Whether or not the Army is resolving issues of noncompliance overtime
- True problem areas versus perceived problem areas
- Potential areas for research focus.

Approach

Step One: The first step was to obtain ECAS data from the Army Reserve, the Active Army, and the Army Guard. See Appendix A for a list of installations and facilities covered by the data. Data for Fiscal Year 1998 (FY98) and a portion of FY99 were not received until July 2000 and therefore had not been comprehensively analyzed at the time of this report.

Step Two: When received, the Active Army and Army Reserve data were in DOS format, which had to be converted into a Microsoft™ ACCESS database. See Appendix B for a list of data fields used in the ACCESS database and their definitions.

Problems with the data included:

- Data that are pre-FY95 were developed without using TEAM Guide and the Active Army Supplement. The checklist item numbers cited in this data have been translated to the current TEAM Guide and Active Army Supplement checklist item numbers. If the regulatory requirement no longer exists, the finding was referred to the XX.2.1 checklist item number in each TEAM Guide Section.
- *Multiple findings.* Findings based on Federal/state regulations and Army Regulations (AR) were stacked together into one finding and marked as a Class 01 finding. A commonly occurring example is the stacking together of the findings for a Spill Prevention Control and Countermeasure (SPCC) and an Installation Spill Contingency Plan (ISCP). In cases where it is obvious which checklist items were joined, both checklist item numbers have been indicated in the field. The class field was then edited to indicate that two classes were involved.
- *Mixed-up findings.* Throughout the data are findings written up against the wrong citation. When the finding description had enough detail, an appropriate checklist item number was assigned. In some instances, however, there was not enough data or the data was confusing. An example of the latter is a reserve center that has hazardous waste findings written up for it under conditionally exempt small quantity generator (CESQG) checklist item numbers, small quantity generator (SQG) checklist item numbers, and treatment storage and disposal facility (TSDF) checklist item numbers. Data in the finding description was insufficient to tell what type of facility it really is. The findings in these cases are marked as Questionable.
- *Edited checklist items.* In some cases the assessors edited the text of the checklist item to reflect an issue that the checklist item did not truly cover. These findings are also marked Questionable.
- *False positives.* These are findings listed as positive for which the finding description indicates simple compliance, not above and beyond. These findings have been identified as FP.
- *Unidentified facilities.* The name of the facility assessed is not always included in the data received from the Army Reserve. Instead of the facility name, this field was often filled with the name of the assessment team. Identifying the majority of the facilities was resolved by searching the Federal Facilities Identification (FFID) database. After searching the FFID,

however, facility names still could not be determined for SC2104SC007, WI2104WI091, and WI2104WI0X1.

- *Confusion in the MACOM field.* Active Army ECAS records have been identified with the following Major Army Commands (MACOMs) that do not seem appropriate for Active Army ECAS data: Corps of Engineers (COE), Headquarters, Department of the Army (HQDA), and Army National Guard (ARNG). The COE data were from an assessment done at a COE research and development (R&D) facility, the Cold Regions Research and Engineering Laboratory (CRREL). The record was deleted. The ARNG data were from a tenant facility and were removed from being marked as an Active Army ECAS record.
- *Root cause lists.* The Army Reserve and the Active Army use the same root cause codes, when they are used, but the Army National Guard uses a different list. Due to the inconsistency with which set of root cause codes was used, and the inconsistency of whether any codes were used at all, it was not possible to do a root cause analysis.

Step 3: All the data were indexed with appropriate keywords (see Appendix C) so that they are searchable by concepts.

Step 4: The data were reviewed by subject experts to identify existing or potential solutions to repeated problems.

Step 5: New data are incorporated as they are generated.

2 Environmental Compliance Assessment System

To effectively review the ECAS data, it was necessary to first understand the existing processes and the variations across MACOMs. Some processes and procedures are common to all three branches of the program, but there are variations as well.

Active Army

The Active Army ECAS program encompasses all MACOMs except the Army Reserve and the Army National Guard. The program is administered by the U.S. Army Environmental Center (AEC) but implemented by the individual MACOMs.

Currently, the Active Army uses a DOS-based software to record its findings of noncompliance. Typically, assessors perform site visits, write findings, and the findings are reviewed by the installation.

The Active Army rates its findings by whether they are Class 1 (regulatory requirement), Class 2 (future regulatory requirement), Class 3 (Army/Department of Defense [DOD] requirement or management practice), or Health and Safety (based on Office of Safety and Health Administration [OSHA] regulations).

Army Reserve

The Army Reserve ECAS program is administered by HQ U.S. Army Reserve Command (USARC), but implemented by the 416th Engineering Command.

As with the Active Army, the Army Reserve uses a DOS-based software to record its findings of noncompliance. Typically, assessors perform site visits, write findings, and the findings are reviewed by the installation.

The Army Reserve rates its findings by whether they are Class 1 (regulatory requirement), Class 2 (future regulatory requirement), Class 3 (Army/DOD requirement or management practice), or Health and Safety (based on OSHA regulations).

Army National Guard

The Army National Guard ECAS program is administered by ARNG- National Guard Bureau (NGB) and executed by one of three contractors selected by ARNG-NGB.

The Army National Guard uses software called WINCASS to record its findings of noncompliance. WINCASS is built in Power Builder. Typically, assessors perform site visits, write findings, a stringent quality assurance (QA) check is done by ARNG-NGB as well as a designated individual on the contract team, and all reviewed by the installation.

For the purposes of ECAS, the ARNG-NGB defines an installation as being all the facilities within a state.

The ARNG rates its findings by whether they are Class 1 (regulatory requirement), Class 2 (future regulatory requirement), Class 3 (Army/DOD requirement or management practice), and Health and Safety (based on OSHA regulations). Unlike the Reserve and the Active Army, however, it also assigns a measure of threat (Significant, Major, Minor).

3 Summary of Findings and Recommendations

Trends Analysis

The purpose of trends analysis is to identify recurring noncompliance issues. While there is similarity across the entire Army, the nature of facilities and mission also impact what noncompliance is found.

Top 20 Findings of Noncompliance Across All Fiscal Years

The first form of trends analysis done was to identify the most common noncompliance findings across all FYs in each of the three ECAS branches. The Class of the finding is indicated in italics.

- **Active Army Top 20 Findings**

1. No or inadequate characterization of wastes (Federal regulation; see checklist item HW.10.1 in the U.S. TEAM Guide) *Class 1*
 - 53 percent were related to NPDES issues
 - 34 percent were related to stormwater
 - 18 percent were related to point source discharges
 - 15 percent were related to washracks
 - 12 percent were related to treatment works
 - 5 percent were related to monitoring
 - 5 percent were related to vehicle maintenance
 - 2 percent were related to plans
2. Noncompliance with state and local wastewater regulations (state regulations written under WA.3.1 U.S. TEAM Guide; see the appropriate state supplement for the actual requirements) *Class 1*
 - 39 percent were related to permits
 - 13 percent related to painting activities
 - 11 percent related to degreasers
 - 9 percent related to plans
3. Noncompliance with state and local air emissions regulations (state regulations written under AE.3.1 U.S. TEAM Guide; see the appropriate state supplement for the actual requirements) *Class 1*
 - 39 percent were related to permits
 - 13 percent related to painting activities
 - 11 percent related to degreasers
 - 9 percent related to plans

- 7 percent related to particulates
- 6 percent related to open burning

4. Noncompliance with state and local drinking water/water quality regulations (state regulations written under WQ.3.1 U.S. TEAM Guide; see the appropriate state supplement for the actual requirements) *Class 1*

- 21 percent related to monitoring
- 14 percent related to backflow prevention
- 14 percent related to design criteria
- 12 percent related to wells
- 12 percent related to recordkeeping
- 4 percent related to reporting

5. Noncompliance with other Federal regulations regarding hazardous materials (HM.2.1) *Primarily Health and Safety (OSHA)*

6. Noncompliance with state and local solid waste regulations (state regulations written under SO.3.1 U.S. TEAM Guide; see the appropriate state supplement for the actual requirements) *Class 1*

- 30 percent related to landfills
- 15 percent related to dumpsters
- 11 percent related to medical waste
- 8 percent related to construction/demolition waste
- 7 percent related to tires
- 7 percent related to plans

7. Hazardous waste satellite accumulation point/accumulation point limits exceeded (Federal regulation; see checklist item HW.75.1 in the U.S. TEAM Guide) *Class 1*

8. Discharge of oil into or upon navigable waters (Federal regulation, see checklist item PO.15.1 in the U.S. TEAM Guide) *Class 1*

9. Inadequate or no spill containment and cleanup materials in petroleum, oil, and lubricants (POL) storage areas (Federal regulation; see checklist item PO.20.1 in the U.S. TEAM Guide) *Class 1*

10. Noncompliance with state and local hazardous waste regulations (state regulations written under HW.3.1 U.S. TEAM Guide; see the appropriate state supplement for the actual requirements) *Class 1*

- 36 percent are related to the storage facilities
- 25 percent are related to labeling
- 23 percent are related to container management
- 13 percent are related to uncharacterized waste
- 6 percent are related to inspections

11. Noncompliance with other Federal regulations regarding water quality (WQ.2.1) *Class 1*

12. Noncompliance with state and local storage tank regulations (state regulations written under ST.3.1 U.S. TEAM Guide; see the appropriate

state supplement for the actual requirements) *Class 1 and Class 2, but since the underground storage tank (UST) deadline has passed, what was a Class 2 would now be a Class 1.*

- 48 percent were related to USTs
- 26 percent were related to aboveground storage tanks (ASTs)
- 26 percent it was impossible to tell if the issue was an AST, a UST, or both
- 13 percent were related to release detection
- 12 percent were related to inspections
- 11 percent were related to containment
- 8 percent were related to recordkeeping
- 13. Noncompliance with or lack of state/Federal NPDES for point source discharges (Federal regulation; see checklist item WA.10.1 in the U.S. TEAM Guide) *Class 1*
- 14. Discharges that would cause pass through or interference at the publicly-owned/federally-owned treatment works (POTW/FOTW) (Federal regulation; see checklist item WA.25.1 in the U.S. TEAM Guide) *Class 1*
- 15. Improper storage of compressed gas cylinders (Federal regulation; see checklist item HM.45.1 in the U.S. TEAM Guide) *Health and Safety (OSHA)*
- 16. Lack of “used oil” label on ASTs (Federal regulation; see checklist item ST.125.1 in the U.S. TEAM Guide) *Class 1*
- 17. Lack of or incomplete Material Safety Data Sheets (MSDS) (Federal regulation; see checklist item HM.1.2 in the U.S. TEAM Guide) *Health and Safety (OSHA)*
- 18. Inadequate management and organization of paperwork (Management Practice finding; see checklist item O5.1.2.A in the Active Army Supplement) *Class 3*
- 19. Inadequate fire protection for flammable/combustible storage areas (Federal regulations; see checklist item HM.35.9 in U.S. TEAM Guide) *Health and Safety (OSHA)*
- 20. No or incomplete asbestos survey (AR 200-1 requirement; see checklist T2.1.3.A in the Active Army Supplement) *Class 3*

- **Army Reserve Top 20**
 1. No or incomplete MSDSs *Health and Safety (OSHA)*
 2. Incomplete radon measurements *Class 3*
 3. No or inadequate asbestos survey *Class 3*
 4. No or inadequate inventory of hazardous waste *Class 3*
 5. Noncompliance with other Federal regulations regarding hazardous materials *Class 1*
 6. No or inadequate Incompatible Use Zone (ICUZ) study *Class 3*

7. No or inadequate surveillance of stormwater discharge *Class 1*
8. No or inadequate coordination with the fire department *Class 3*
9. No or inadequate written hazardous waste management plan *Class 3*
10. No or incomplete master listing of all hazardous substances *Class 3*
11. No or inadequate Installation Asbestos Management Plan *Class 3*
12. Noncompliance with other Federal regulations regarding air emissions *Class 1*
13. Inadequate fire protection for flammable/combustible storage areas
Health and Safety (OSHA)
14. No or incomplete file of environmental regulations *Class 3*
15. Inadequate flammable/combustible storage rooms inside of buildings
Health and Safety (OSHA)
16. No copy of SPCC *Class 1*
17. No or inadequate plan for reclaimed, recoverable, and waste liquid petroleum products *Class 3*
18. No or inadequate storage and handling of flammable/combustible materials *Health and Safety (OSHA)*
19. Inadequate flammable storage cabinets *Health and Safety (OSHA)*
20. Insufficient spill containment and cleanup materials *Class 1*.

- **Army National Guard Top 20**
 1. No or inadequate characterization of wastes *Class 1*
 2. Noncompliance with state and local regulations *Class 1*
 3. No or inadequate ISCP *Class 3*
 4. Insufficient spill containment and cleanup materials *Class 1*
 5. No or inadequate secondary containment for bulk storage tanks *Class 1*
 6. Noncompliance with state/local hazardous waste regulations *Class 1*
 7. No "USED OIL" label on containers other than tanks *Class 1*
 8. No copy of SPCC *Class 1*
 9. Noncompliance with state and local regulations (ST.3.1) *Class 1*
 10. National Environmental Policy Act (NEPA) is not integrated into planning *Class 1*
 11. No or inadequate coordination with the fire department *Class 3*
 12. Inappropriately operating as a hazardous waste CESQG *Class 1*
 13. Introduction of pollutants into POTW/FOTW *Class 1*
 14. SPCC plan inadequate *Class 1*
 15. Inadequate ISCP training *Class 3*
 16. Noncompliance with state and local solid waste regulations *Class 1*
 17. Natural resources are not or are inadequately managed to support the military mission while also protecting and enhancing resources for multiple use, sustainable yield, and biological integrity *Class 3*
 18. Nonparticipation in state/local recycling programs *Class 3*

19. No or inadequate SPCC training *Class 1*
20. Inappropriately operating as a hazardous waste SQG *Class 3*

Trends by Topic and Fiscal Year

In addition to identifying the top 20 findings across all topic areas and across all FYs for the Active Army, Army Reserve, and Army National Guard, the data have been analyzed for the following:

- classification of findings by legislative source (see Appendix D)
- the top three findings in each topic area, across all FYs, for each MACOM (see Appendices E, F, and G)
- the top three findings in each topic area, in each FY, for the Active Army, Army Reserve, and Army National Guard (see Appendices H, I, and J).

When there was a tie for placement, the same ranking number was used and all tied noncompliance findings were listed.

Some of the inconsistencies between commands can be attributed to differences in activities, but some of it also has to do with different assessors, which is a flaw in the process as it was executed during these assessments. A prime example of an inconsistency between assessors has to do with secondary containment for ASTs over 660 gal. Some assessors reviewing MACOMs view that regulation as a suggestion, not a requirement. Other assessors view it as a requirement. How it was viewed determined whether it was written up or not.

Active Army

When looking at the three most common findings in each topic area by FY across the Active Army, definite trends can be observed, some of which differ from those appearing in the top 20 list. Unfortunately, in looking at this information it was found that in virtually every topic area at least one of the top three noncompliance issues identified in the early years of ECAS still shows up in the top three in the later years.

In the Active Army these trends are as follows (see Appendix G for a tabular representation of this data): (Note that these observations are based on data from FY94 through FY98).

- *Air Quality:* Not surprisingly, the most consistent trend across all FYs is the number one finding — noncompliance with state/local regulations. This category encompasses a broad range of issues though. The most commonly repeated ones across all FYs are: open lids on solvent degreasers, unpermitted sources (construction and/or operating permits), improper incinerator operation, and particulate emissions. A common finding that dropped off the top three list in FY97 related to the signs on gasoline pumps. While it would be nice to think that the Army finally achieved compliance with this requirement, the reality is, this requirement was rescinded. See the individual state supplement to U.S. TEAM Guide for specific state requirements. *These are all Class 1 findings.*
- *Cultural Resources:* In every year's data, the lack of or inadequate historic properties survey is in the top three findings. In FY96 a management practice finding (*Class 3*) on inadequate management/organization of paperwork made it into the top three. In FY94 through FY96 the lack of or inadequate Installation Cultural Resources Management Plan (ICRMP) shows up in the top 3. It disappears in FY97, but it is questionable as to whether it has disappeared because required installations have an ICRMP and all the ICRMP are adequate, or if the finding is no longer being written because this requirement is interpreted as having a future compliance date. In more recent years, findings concerning inadequate curation of long-term collections are increasing. The survey finding and the long-term management of collections are based on Federal regulations, 36 CFR 60.9; see checklist item CR.5.1. in U.S. TEAM Guide. The ICRMP finding is based on requirements in AR 200-4 and DoD Instruction (DODI) 4715.3 (see checklist item CR.1.6.A in the Active Army Supplement). *The survey and collection management are Class 1 findings, and under the revised DOD definitions of Classes, the ICRMP is also a Class 1.*
- *Hazardous Materials Management:* Contrary to expectations, improper labeling of containers is not an issue that consistently shows up in the top three, but inadequate management of compressed gas cylinders is an issue, placing in the top three from FY95 through FY98. Findings written under the heading "noncompliance with other Federal regulations" also consistently places in the top 3. These findings were primarily related to PPE and eye-wash issues. The compressed gas finding is based on Federal regulations, 29 CFR 1910.101; see checklist item HM.45.1 U.S. TEAM Guide. In FY99 and FY00 a sudden drop off in the numbers of hazardous materials findings was observed. This drop off is due to the following decision in December 1998:

Under the ECAS program, only a limited number of OSHA regulations will be reviewed. In the TEAM Guide, the checklist items with OSHA citations (Title 29) that will be assessed are found in PM.45.2 (Pesticides), PO.45 (Service Stations), and SO.110 (Medical Waste).

OSHA and OSHA-related issues that will not be addressed in the ECAS program include: eyewashes, fire extinguishers, HAZCOM, MSDSs (i.e., in relation to HAZCOM), Chemical Hygiene Plans, and storage of hazardous materials in containers and tanks (i.e., flammable combustible liquids, storage of acids, storage of compressed gases). These issues are currently found in TEAM Guide sections HM.1.2 through HM.1.4, HM.10, HM.15, HM.35, HM.40, HM.45, ST.120).

Assessors will not add checklist items based on OSHA, NFPA regulations, Compressed Gas Association Standards, ANSI standards, TB-MEDs, ARs, DODIs or DODRs to the Hazardous Materials section without submitting the citation for review by AEC for inclusion in the TEAM Guide or Active Army Supplement.

- *Hazardous Waste:* The number one finding in every FY is inadequate or lack of waste stream characterizations. This finding addresses orphan drums/containers and waste streams being disposed of in the solid waste that need to be disposed of as hazardous waste (e.g., weapons cleaning rags contaminated with trichloroethane (TCE)-containing solvent, paper waste from the floor of paint booths). The other most persistent finding in hazardous waste (every FY) relates to the management of satellite accumulation points (SAPs). These findings mostly related to excess quantities of waste at the SAP. While the Army seems to be succeeding at managing its 90-day storage areas, there are still problems with moving the waste from the SAPs to the 90-day areas or a TSDF. And shop personnel are not trained. The characterization finding is based on Federal regulations, 40 CFR 261.3, 261.4(b), 261.21 through 261.24, and 262.11; see checklist item HW.10.1 in U.S. TEAM Guide. The SAP findings are based on Federal regulations, 40 CFR 262.34(c); see checklist item HW.35.1 (for SQGs) and HW.75.1 (for LQGs) in the U.S. TEAM Guide. *These findings are all Class 1.*

Although the numbers are not high enough to affect these statistics, there is an increase in FY99 and FY00 findings on the management of universal waste. This increase is due to the adoption of the universal waste regulations by the states. Until these Federal regulations were adopted by individual states, they could not be implemented.

- *Natural Resources*: The most persistent finding is the lack of or inadequate Installation Natural Resource Management Plan (INRMP). In 3 of the 5 years of data, this was the number one finding in Natural Resources. The second most common finding (FY95–97) is no (or inadequate) survey of endangered species. The plan finding is based on both Federal and Army requirements, *Sikes Act*, 42 USC 670 et seq (see checklist item NR.1.2 in U.S. TEAM Guide), and Army/DOD requirements (see checklist item NR.1.3.A in the Active Army supplement to TEAM). The survey finding is based on Federal requirements, 50 CFR 402.01(a), 402.10, and 402.12, see checklist item NR.20.1 in the U.S. TEAM Guide. *The survey is a Class 1 finding and, under the revised DOD definitions of Classes, the INRMP is also a Class 1.*
- *Other Environmental Issues - NEPA*: This category seems to have a success story during FY94–96, NEPA not being integrated into the planning process was consistently in the top three findings. It does not place in the top three at all in FY97 and FY98. Instead, a management practice (MP) finding of inadequate management and organization of paperwork appears in the top three in FY96 and stays there. So, while the Army seems to be better at incorporating NEPA into its processes, it is not managing all the ensuing paperwork well.
- *Other Environmental Issues – Noise*: Two of the top three findings have been the same every year FY94–97. They are: no or inadequate ICUZ study and no or inadequate noise-complaint procedure. No noise findings were in the data available for FY98. These findings are based on requirements in AR 200-1. *Class 3*
- *Other Environmental Issues – Installation Restoration Program (IRP)*: The only finding that consistently shows up in the top three in this category first placed in FY95. This is the lack of or inadequate removal site evaluation. No IRP findings were found in the data available for FY98. The evaluation findings are based on Federal regulations, 40 CFR 300.410; see checklist item O3.1.2 in U.S. TEAM Guide. *Class 1*
- *Other Environmental Issues – Pollution Prevention (P2)*: Insufficient data.
- *Other Environmental Issues – Environmental Management*: Due to the fluctuation in this section in what is being assessed and what has been assessed, it is difficult to track trends. The most persistent findings across all FYs, however, relate to insufficient funding and staffing, which was closely followed by internal communication problems. *Class 3*

- *Pesticides Management:* The finding that shows up most frequently across multiple FYs (FY94, FY96 – 98) is no or inadequate Installation Pest Management Plan (IPMP). That is followed by inadequate pesticide storage and mixing areas. These findings are driven by requirements in AR 420-76, AR 200-5 (replacement for AR 420-76), and DODI 4150.7. *Class 3*
- *POL Management:* The problem that shows up at the top of the list most frequently (every FY) in this category is the lack of or inadequate spill containment and cleanup materials. After the problems with appropriate spill containment/clean up materials, the lack of or inadequate SPCC made the top three every FY since FY95. The containment and cleanup materials finding is based on Federal regulations, 40 CFR 110.2, 110.3, 110.5, and 110.6; see checklist item PO.20.1 in the U.S. TEAM Guide. The SPCC findings are based on Federal regulations, 40 CFR 112.1(d) through 112.7; see checklist items PO.5.1 through PO.5.6 in U.S. TEAM Guide. *Class 1*
- *Solid Waste Management:* Not surprisingly, the most consistent trend across all FYs is noncompliance with state and local regulations. This category encompasses a broad range of issues though. The most commonly repeated issues across all FYs are: waste tire storage, landfill management, and medical waste management. The second most persistent finding has to do with the improper storage of solid waste or recyclables prior to pick up for disposal. This finding usually translates to overflowing dumpsters, open lids on dumpsters, and recyclables being disposed of as solid waste. This second finding is based on a Federal regulation, 40 CFR 243.200-1; see checklist item SO.10.1 in the U.S. TEAM Guide. See the individual state supplement to U.S. TEAM Guide for specific state requirements. *Class 1*
- *Storage Tanks Management:* The most prevalent findings from FY94 through FY97 related to UST upgrading. The success story here is the Army's success in meeting the Environmental Protection Agency's (EPA's) December 1998 deadline. The next most common trend (starting in FY95) is noncompliance with state/local regulations. This category encompasses a broad range of state-regulated issues. The most commonly repeated state-regulated issues across all FYs since FY95 are: tanks (ASTs and USTs) not being registered; inadequate spill and overfill protection; and inadequate secondary containment for ASTs. See the individual state supplement to U.S. TEAM Guide for specific state requirements. *Class 1 and 2 (USTs until December 1999).*
- *Toxic Substances – PCBs:* The same three issues make the top three in all FYs. The first is no or inadequate PCB annual document log; second is the

lack of required markings on PCB equipment; and third is inadequate storage areas for PCB items. No PCB findings were found in the data available for FY98. The marking finding is based on a Federal regulation, 40 CFR 761.40 and 761.45; see checklist item T1.10.2. in the U.S. TEAM Guide. The documentation finding is based on a Federal regulation, 40 CFR 761.180(a); see checklist item T1.15.1 in the U.S. TEAM Guide. The storage finding is based on a Federal regulation, 40 CFR 761.65(a) through 761.65(b)(1), see checklist item T1.40.2 in U.S. TEAM Guide. *Class 1*

- *Toxic Substances – Asbestos*: The same two issues show up in the top three in each year for which there is data. These issues are the lack of or inadequate asbestos survey and the lack of or inadequate Asbestos Management Plan. No asbestos findings were in the data available for FY97. Both of these findings are driven by requirements in AR 200-1. *Class 3*
- *Toxic Substances – Radon*: The only persistent finding across FYs, and in the top three every FY, is the lack of or incomplete radon measurements. No radon findings were found in the data available for FY98. This finding is driven by requirements in AR 200-1. *Class 3*
- *Toxic Substances – LBP*: The most common trend in this category is the lack of or inadequate notification of housing occupants as to the lead-based paint (LBP) hazard in their housing. *Class 1*
- *Wastewater*: The most consistent trend across all FYs and the number one finding is noncompliance with state and local regulations. This category encompasses a broad range of issues. The most commonly repeated state-regulated issues across all FYs are: unpermitted discharges and violations of existing permits. The second most persistent findings, across all FYs, is the discharge of inappropriate materials/waste to the POTW/FOTW. This discharge finding is based on Federal regulations, 40 CFR 403.5(a) through 403.5(c); see checklist items WA.25.1 and WA.25.3 in the U.S. TEAM Guide. See the individual state supplement to U.S. TEAM Guide for specific state requirements. *Class 1*
- *Water Quality*: The most consistent trend across all FYs and the number one finding is noncompliance with state and local regulations. This category encompasses a broad range of state-regulated issues. The most commonly repeated state-regulated issues across all FYs are: no cross connection control program, improper well closure, and inadequate recordkeeping. See the individual state supplement to U.S. TEAM Guide for specific state requirements. *Class 1*

Army Reserve

When looking at the three most common findings in each topic area by FY across the Army Reserve, definite trends can also be observed, some of which differ from those appearing in the top 20 list. Unfortunately, in looking at this information it was found that in virtually every topic area at least one of the top three noncompliance issues identified in the early years of ECAS still shows up in the top three in the later years. These are not always the same trends as found in the Active Army, however, due to the nature and size of Reserve facilities. See Appendix H for a tabular representation of this data. (Note that these observations are based on data from FY91 through FY98.)

- *Air Quality:* Not surprisingly, the most consistent trend across all FYs and the number one finding is noncompliance with state and local regulations. This category encompasses a broad range of issues. The most commonly repeated ones across all FYs are open lids on solvent degreasers and unpermitted sources (construction and/or operating permits) and improper incinerator operation. Unlike the Active Army, a persistent finding for the Reserve is the lack of or inadequate emissions inventory. A finding that has dropped was the lack of or incomplete quarterly chlorofluorocarbon (CFC) procurement reports. With the revision of AR 200-1, this requirement was removed. *The inventory is a Class 3 finding, while noncompliance with state/local regulations is a Class 1 finding.*
- *Cultural Resources:* In FY91 through FY96 data, the lack of or inadequate historic properties survey is in the top three. Additionally findings in every FY indicate that effects of undertakings on historic properties are not adequately considered. Unlike the Active Army, the ICRMP does not show up as a persistent issue. *Both are Class 1 findings.*
- *Hazardous Materials Management:* The top findings trends in this topic area are completely different than for the Active Army, because the Reserve has a different perspective on what is and is not to be audited in this topic area. Findings of noncompliance that occur annually relate to MSDSs, storage of flammable/combustible liquids, and coordination with the local fire department. *These findings are all Health and Safety and not Environmental findings.*
- *Hazardous Waste:* As with the Active Army, a persistent finding is inadequate or lack of waste stream characterization/inventory. This finding addresses orphan drums/containers; waste streams being disposed of in the solid waste that need to go as hazardous waste (e.g., weapons cleaning rags

contaminated with TCE-containing solvent, paper waste from the floor of paint booths). The other persistent finding for the Army Reserve is the lack of or inadequate hazardous waste management plan. *The characterization finding is based on Federal regulations and is Class 1; the hazardous waste management plan is Class 3.*

- *Natural Resources:* Unlike the Active Army, the INRMP is not an issue for the Army Reserve, because it lacks large tracts of land. They do still need to perform surveys of threatened and endangered species on the property they do own. Problems also exist with grounds maintenance at Reserve Centers. This is probably a result of a lack of personnel dedicated to this type of job. *The survey is a Class 1 finding and inadequate grounds maintenance is a Class 3 finding.*
- *Other Environmental Issues - NEPA:* Findings that NEPA is not being integrated into the planning process are consistently in the top three. *This is a Class 3 finding.*
- *Other Environmental Issues - Noise:* Two of the top three findings have been the same every year during FY91-97. They are: no or inadequate ICUZ study and no or inadequate noise complaint procedure. This duplicates the situation for the Active Army. These findings are based on requirements in AR 200-1. *Class 3*
- *Other Environmental Issues - IRP:* The only finding that consistently shows up in the top three in this category is the lack of or inadequate screening for the past use of hazardous substances. *Class 3*
- *Other Environmental Issues - P2:* The lack of or incomplete master listing of hazardous substances and/or a P2 Plan are the consistent repeats in this category. *Class 3*
- *Other Environmental Issues - Environmental Management:* The only consistent theme in this medium is a lack of environmental training as required by AR 200-1. *Class 3*
- *Pesticides Management:* Unlike the Active Army, there are findings in all FYs for no or inadequate review of pesticide contracts and pesticide applicators not being DOD-certified. These both are occurring because the usual practice for a Reserve Center is to contract out pest control operations or to have a soldier do it who has never been certified. *Class 3*

- *POL Management*: The consistent theme in this category is a lack of or inadequate plans related to the management of POL (e.g., PSCC Plans, ISCP, and/or plans for reclaimed, recoverable, and waste liquid petroleum). The last plan is no longer required with the re-write of AR 200-1. *The SPCC is a Class 1 finding while the ISCP is a Class 2 finding.*
- *Solid Waste Management*: The most consistent trend across all FYs is non-participation in available recycling programs. Army personnel are not required to recycle, but are encouraged to do so. *Class 3*
- *Storage Tanks Management*: The most prevalent findings from FY91 – 97 related to UST upgrading. After the UST issue, the next most common trend (starting in FY95) is inadequate secondary containment for ASTs. *Class 1 and 2 (USTs until December 1999).*
- *Toxic Substances – PCBs*: The only repetitive finding is the lack of required markings on PCB equipment. This finding stems, in part, from transformers located on Reserve property that are not clearly marked as to whether they belong to the local utility company or the Army Reserve. *Class 1*
- *Toxic Substances – Asbestos*: The same two issues show up in the top three in each year for which there is data. These issues are the lack of or inadequate asbestos survey and the lack of or inadequate Asbestos Management Plan. Both of these findings are driven by requirements in AR 200-1. *Class 3*
- *Toxic Substances – Radon*: The only persistent finding across FYs, and in the top three in every FY, is the lack of or incomplete radon measurements. This finding is driven by requirements in AR 200-1. *Class 3*
- *Wastewater*: The most consistent trend across all FYs related to the surveillance of stormwater discharge. This is not a regulatory requirement, but a management practice. The second most persistent finding, across all FYs, is the discharge of inappropriate materials/waste to the POTW/FOTW. *Class 1*
- *Water Quality*: The most consistent trend across all FYs and the number one finding is noncompliance with state and local regulations. This category encompasses a broad range of state-regulated issues. The most commonly repeated state-regulated issues across all FYs are improper well closure and inadequate recordkeeping. *Class 1*

Army National Guard

When looking at the three most common findings in each topic area by FY across the Army National Guard, it is difficult to identify trends because there are only 2 years worth of data. See Appendix I for a tabular representation of this data.

Trends Across Topics

Program management issues such as training, recordkeeping, plans, permits, labeling, and reporting are not confined to a single topic area, but cross all topics. These program management issues account for 40 percent of all the findings:

Reporting Requirements = 1 percent
Permits = 5 percent
Training = 5 percent
Labeling = 5 percent
Program Management* = 7 percent
Plans = 8 percent
Recordkeeping = 8 percent

*Program Management encompasses staffing, budget, communications, policies, and procedures.

Numeric Analysis of Findings

Numbers of Findings

To define the validity of numeric analysis, it is important to understand the baseline. As represented in Table 1, data received from the Army Reserve date back further than any other data. But the Army Reserve had a more difficult time supplying current data. Table 1 represents the number of records in the database, by FY, for the Active Army, Army Reserve, and the Army National Guard. Additional data for FY98 and a portion of FY99 were not received until July 2000 and had not been comprehensively analyzed at the time of this report.

Table 1. Number of database records by organization and FY.

FY	Active Army	Army Reserve	Army National Guard	TOTAL
Oct 1990 - Sept 1991 (FY91)	No data	58	No data	58
Oct 1991 - Sept 1992 (FY92)	No data	980	No data	980
Oct 1992 – Sept 1993 (FY93)	No data	1974	No data	1974
Oct 1993 – Sept 1994 (FY94)	2195	922	No data	3117
Oct 1994 – Sept 1995 (FY95)	2669	37	No data	2706
Oct 1995 – Sept 1996 (FY96)	1994	822	No data	2816
Oct 1996 – Sept 1997 (FY97)	949	662	1541	3152
Oct 1997 – Sept 1998 (FY98)	65	182	386	633
Oct 1998 – Sept 1999 (FY99)	1180	No data	No data	1180
Oct 1999 – Sept 2000 (FY00)	439	No data	No data	439

Positive Findings

A Positive finding is defined as one that documents an instance of going above and beyond compliance with the regulations, not just simple compliance. While reviewing the data it became clear that this definition was not always adhered to. Therefore, findings that were originally classed as Positive (898) that did not meet the definition for positive findings were reclassified as False Positives (399). This 49 percent reflects the desire of the auditor to give individuals a "pat on the back" for doing a difficult job well. There was no indication, however, of anything done that was unique or innovative. Instead of being documented as positive findings, these kinds of kudos are best conveyed verbally in the outbrief when commanding officers are present. See Appendices K, L, M, N, and O for specific details.

Accuracy of Findings

Findings were classed as questionable for the following reasons:

Q1 - Findings for a specific installation/facility are written under regulations relating to more than one size of hazardous waste generator. The text of the finding does not document actual generator status.

Q2 - Findings for a specific installation/facility are written under regulations relating to both hazardous waste generators and TSDFs. The text of the finding does not document actual generator status or TSDF status.

Q3 - The regulation cited is not relevant for the description provided in the text of this finding.

Q4 - The positive finding does not indicate the installation/facility has gone above and beyond regulatory requirements or that they have shown extraordinary initiative and innovation.

Q5 - The finding combines Class 1 and Class 3 regulatory requirements into one finding.

In reviewing the data (see Appendix P for numeric details) it is obvious that the Army National Guard has virtually no questionable findings, an average of 1.5/yr for the 2 yr of data received; whereas the Active Army averaged 130 questionable findings per year for the 4 yr of complete data received and the Army Reserve averaged 82 questionable findings per year. It can be concluded that the Army National Guard has a superior quality assurance program to ensure that the findings generated under ECAS are accurate.

For the Active Army, the primary reason for being questionable was a disconnect between the description of the noncompliance situation and the cited regulation. The most prevalent reason for the Army Reserve, however, is positive findings that do not indicate going above and beyond. In talking to members of the Reserve about this issue, it was noted that some Reserve audit teams feel they always have to leave a facility with at least one positive finding, even if it is for something like good landscaping.

Citations of Negative Findings

Findings are written up against one of three types of citations: (1) a management practice finding based on a suggested good idea, (2) an AR/DOD finding

based on requirements found in Army Regulations, DOD Instructions, and/or DOD Directives, and (3) a regulatory finding based on a state/local/Federal requirement. As is to be expected, more regulatory findings were written than management practices or AR/DOD. See Appendix Q.

Pollution Prevention Solutions

Rather than identifying pollution prevention (P2) solutions for all potential compliance findings, the top 20 noncompliance findings for the Active Army were analyzed for potential P2 solutions. Correcting most of the following findings involves process change and/or proper training for applicable personnel instead of a technological solution. However, the following programs might also facilitate compliance through “P2 glasses” across topic areas.

1. *Diversifying the P2 Program:* The P2 mission is to reduce or eliminate pollution of land, air, and water resources. An individual can make an impact while implementing a P2 program; however, one person rarely has enough knowledge or expertise to understand everything related to P2. Forming a team of experts from natural resources, energy conservation, compliance, and other environmental areas can lead to better decisions, initiatives, and solutions by drawing on the skills, knowledge, and experience of many disciplines.
2. *Forming an internal PPOA Site Assessment Team:* These “internal” site assessments involve no regulators, are of short duration, and focus on solving maintenance and environmental challenges. Solutions are sought that both protect the environment and reduce workload and/or cost to the customer. Emphasis is placed on finding, developing, and implementing only those material substitutions, work process changes, and technology acquisitions that will not increase the burden of the producer.

No or Inadequate Characterization of Wastes (HW.10.1)

P2 solutions: Not knowing the characterization of waste is a potential source of pollution due to improper disposal and/or storage. Technologies/processes that can assist:

- Develop a waste analysis plan that serves to standardize and optimize the required testing of wastes so that all wastes at a site are properly characterized prior to disposal in a simple and efficient manner. A waste analysis plan establishes the characterization frequency and analytical requirements to be satisfied for every identified waste at the installation and provides guidance

for handling new wastes. Components of the plan include: Responsibilities for Characterization Prior to Disposal, Characterization by Generator Knowledge of a Listed Hazardous Waste, and Determining the Frequency of Characterization.

- HazMat Pharmacy Implementation: This approach includes a centralized system responsible for control of hazardous material inventories from requisition to disposal. The Pharmacy manages authorization, procurement, receipt, storage, issue, use, reuse/recycling, and eventual disposal. Knowing what is on hand and procuring it will eliminate having inadequate characterization of waste.
- Computerized tracking systems that may enhance or even be required by a HazMat Pharmacy system. Tracking facilitates compliance with reporting requirements and the data can provide accurate accounting for emergency planning and community right-to-know (EPCRA) reporting as well as a historic record of reductions in the use of specific hazardous materials. The tracking begins when a material is ordered and follows the material and its container through receipt, issue, use, return, reissue, recycling, and disposal.

Noncompliance With State and Local Wastewater Regulations (WA.3.1)

P2 solutions: There are no easy technological fixes; most of the findings can be corrected through process change and/or training. However, a few storm water and wastewater technologies may be enhancements:

- Sand filter for treating storm water runoff: Sand filters can be used for storm water quality control and managing storm water runoff volumes. Sand filters are composed of at least two components: a sedimentation chamber and a filtration chamber. The sedimentation chamber removes floatables and heavy sediments, while the filtration chamber removes additional pollutants by filtering flow through a sand bed.
- Water quality inlets (WQIs) to control storm water runoff: WQIs are structures designed to separate pollutants from the first flush of storm water using a series of chambers for pollutant sedimentation, screening, and separation. A water quality inlet typically consists of a sedimentation chamber, an oil separation chamber, and a discharge chamber. Because of their separation capabilities, WQIs are occasionally referred to as oil/grit separators or oil/water separators. These best management practices (BMPs) may be constructed on site, precast, or manufactured by a vendor.

- Wet detention ponds to treat storm water runoff: A wet detention pond is a constructed pond that maintains a permanent pool of water within a designated area, and relies on physical, biological, and chemical processes to remove pollutants from storm water runoff. Pollutants removed include sediment, organic matter, dissolved metals, and nutrients. In addition, wet detention ponds control storm water flow that prevents downstream flooding. As storm water enters the pond, treated water is displaced and discharged into a receiving body of water.
- Secondary use of acids and alkalis for wastewater treatment: The secondary use of acids and alkalis as treatment chemicals in an Industrial Wastewater Treatment Plant (IWTP) is a feasible waste reduction method, effectively reducing the disposal of used or excess acids and alkalis. The secondary use of acids and alkalis can reduce problems associated with disposal of acid and alkali waste streams, such as the high cost and the liability of normal waste disposal.
- Hydroblasting wastewater recycling system: This technology has been used to successfully recycle wastewater generated during the hydroblasting of ships' boilers. Hydroblasting is a time-consuming process that generates 12,000 to 20,000 gallons of wastewater containing heavy metals and sodium nitrate. Sodium nitrate is added to the water used in the hydroblasting process and acts as a surface conditioner that prevents flash rusting of boiler tube surfaces during hydroblasting operations. It has been found that this water/sodium nitrate mixture can be reused in the hydroblasting process without adversely affecting the finished product only if the solids have been removed.
- Laser reduction of toxic organic compounds in wastewater: Laser-Induced Photochemical Oxidative Destruction (LIPOD) is a method to photochemically oxidize organic compounds in wastewater. Using a laser, ultraviolet radiation can be applied to organic compounds to achieve complete oxidation of a variety of organic compounds.
- Reverse osmosis (RO) and ultrafiltration wastewater treatment process: RO technology uses membrane separation systems typically to remove inorganic salts from wastewater. However, RO can also be used to treat wastewater containing some organic solvents. The RO system uses a semipermeable membrane to separate pure water from contaminated liquids.
- Evaporator for aqueous waste reduction: Evaporation is a proven technology for reducing aqueous wastes. By using active evaporation or heating to

evaporate excess water, hazardous waste rinse water disposal or wastewater treatment can be minimized.

- Biological aqueous wastewater treatment system: The BioTrol Aqueous Treatment System (BATS) is a biological treatment system for contaminated wastewater. This system uses naturally occurring microbes; however, where highly toxic or recalcitrant target compounds are present, microbial amendments are introduced.
- Precipitation and microfiltration wastewater treatment systems: The precipitation and microfiltration process uses a combination of treatments on a variety of wastes. Chemical precipitation of heavy metals is the first treatment in this process. Precipitates and all particles larger than 0.1 to 0.2 micron size are filtered through a unique tubular fabric crossflow microfilter. Concentrate is dewatered using conventional processes, such as filter press or centrifuge.
- Powdered activated carbon wastewater treatment: The technology removes organic contaminants from wastewater and minimizes the inhibitory effects of process wastewater containing toxic organic compounds.

Noncompliance With State and Local Air Emissions Regulations (AE.3.1)

P2 solution: Process changes and/or training would correct most of the findings. In respect to emissions from open burning/open detonation (OB/OD), the BangBox testing chambers, emissions characterization of complete munitions, and grouping munitions into emissions families so that future testing requirements can be abbreviated might prove to be viable P2 solutions to OB/OD emissions. A draft report of the first subsurface BangBox test was completed in May 1997.

Noncompliance With State and Local Drinking Water/Water Quality Regulations (WQ.3.1)

P2 solution: All findings can be addressed by process change and/or training programs. Following proper operations and maintenance (O&M) procedures and scheduling guidelines would address any equipment failures.

Noncompliance With Other Federal Regulations Regarding Hazardous Materials (OSHA-based regulations pertaining to issues such as personal protection equipment [PPE] and eyewashes) (HM.2.1)

P2 solution: There is no P2 solution for these findings. It is a matter of keeping abreast of a dynamic environmental regulatory environment.

Noncompliance With State and Local Solid Waste Regulations (SO.3.1)

P2 solution: Most findings can be addressed by process change and/or training programs. Actual technologies/procedures that may assist in achieving compliance and minimizing or prohibiting potential pollution follow:

- Recycling Sorting Line (RSL): An RSL, also known as a clean material recovery facility (MRF) processes commingled recyclables from curbside collection programs, drop-off sites, or satellite recycling centers. A properly designed RSL will process and recover up to 90 percent of the collected material. Recovered material is ultimately re-sold to specialty recyclers. Materials processed include newspaper; steel and aluminum cans; brown, green, and clear glass; polyethylene terephthalate (PET); and high-density polyethylene (HDPE) plastics. An RSL serving a small community is typically designed to process less than 50 tons/day of recyclables. An RSL serving a municipality can process 200 to 300 tons/day of recyclables. A sorting line may keep potential HW or medical wastes from being landfilled.
- Solid waste sorting line (SWSL): An SWSL, also known as a dirty MRF, processes recyclables from a stream of raw solid waste and is typically used in rural areas with no curbside programs or in communities that are not actively promoting recycling. A properly designed SWSL will process and recover between 5 and 45 percent of the incoming material as recyclables; the remainder is used in a waste-to-energy facility, landfilled, or otherwise disposed of.
- Use of collection containers for recycling: Using individual, dedicated (compartmentalized) recycling containers to separate common recyclables such as plastics, glass, paper, cans, and compostables from both residential and commercial waste streams eliminates or reduces the need to sort the materials at the recycling center and results in lower processing costs. The containers may be placed at exterior or interior locations around the residential or work areas, allowing the residents or personnel to place each type of material in its own bin.

Hazardous Waste Satellite Accumulation Point/Accumulation Point Limits Exceeded (HW.75.1)

P2 solution: Process change and/or training. In addition, ensuring that the contractor (if picked up by a contractor) provides an adequate pick-up schedule based on usage.

Discharge of Oil Into or Upon Navigable Waters (PO.15.1)

P2 solution: Ensure that spill and response plans are up-to-date and personnel are properly trained in procedures to follow in the event of an accidental discharge.

Inadequate or No Spill Containment and Cleanup Materials in POL Storage Areas (PO.20.1)

P2 solution: Can be solved by process changes and/or training.

Noncompliance With State and Local Hazardous Waste Regulations (HW.3.1)

P2 solution: The findings here can all be addressed by process change and/or training programs and following prescribed O&M schedules for all equipment.

Noncompliance With Other Federal Regulations Regarding Water Quality (WQ.2.1)

P2 solution: Process changes and/or adequate training to ensure compliance with Federal regulations.

Noncompliance With State and Local Storage Tank Regulations (ST.3.1)

P2 solution: Process changes and/or adequate training to ensure up-to-date recordkeeping and procedures are followed.

Noncompliance With or Lack of State/Federal NPDES for Point Source Discharges (WA.10.1)

P2 solution: Process changes and/or adequate training.

Discharges That Would Cause Pass Through or Interference at the POTW/ FOTW (WA.25.1)

P2 solution: Process change and/or training – following proper O&M procedures/schedules.

Improper Storage of Compressed Gas Cylinders (HM.45.1)

P2 solution: Process change and/or training – find out how and store the compressed cylinders correctly and safely.

Lack of “Used Oil” Label on ASTs (ST.125.1)

P2 solution: Process change and/or training.

Lack of or Incomplete MSDSs (HM.1.2)

P2 solution: Process change and/or training. Of course, procuring the correct and complete MSDS would correct the problem.

Inadequate Management and Organization of Paperwork (O5.1.2.A)

P2 solution: Process change and/or training for personnel.

Inadequate Fire Protection for Flammable/Combustible Storage Areas (HM.35.9)

P2 solution: Process change and/or training. In this case, find out guidelines for fire protection and procure the proper equipment.

No or Incomplete Asbestos Survey (T2.1.3.A)

P2 solution: Process change and/or training. Either do the survey or finish it properly.

Appendix A: Installations/Facilities Included in the Data Analysis

This list is organized by Major Command and the FY in which the assessment was done.

AMC:

AMC:	FY94	FY95	FY96	FY97	FY98	FY99
• Blue Grass Activity - LBAD	• APG	• ARL-Adelphi Lab	• Anniston Army Depot	• No data	• APG	• ARL-Adelphi Lab
• Charles Melvin	• ARDEC	• Badger AAP	• Army Soldier Systems Command			Detroit Arsenal
• Price Supt. Ctr.	• Corpus Christi Army Depot	• Camp Stanley Storage Activity	• Systems Command			Iowa AAP
• Crane Army	• Ft. Monmouth - Main Post	• Detroit Arsenal	• Blue Grass Activity - LBAD			Milan Army Ammunition Plant
• Ammunition Activity	• Joliet AAP - Kankakee	• Detroit Arsenal Tank Plant	• Kansas AAP			Tobyhanna Army Depot
• Ethan Allen Firing Range	• Letterkenny Army Depot	• Indiana AAP	• Lone Star AAP			Tooele Army Depot
• Hawthrone AAP	• Lima Army Tank Plant	• Iowa AAP	• Louisiana AAP			
• Holston AAP	• Milan AAP	• Lake City Army Ammo Plant	• McAlester AAP			
• Lake City Army Ammo Plant	• Red River Army Depot	• Newport Chem. Activity	• Rocky Mtn. Arsenal, Prg. Mgr.			
• Lone Star AAP	• Rock Island Arsenal	• Pine Bluff Arsenal	• Redstone Arsenal			
• Longhorn AAP	• Riverbank AAP	• Pueblo Army	• Volunteer AAP			

FY94	FY95	FY96	FY97	FY98	FY99
• Seneca Army Depot	• Savanna Army Depot	Depot			
• Stratford Army Engine Plant	• Tooele Army Depot	• Scranton AAP			
• Twin Cities AAP	• Umatilla Depot	• Sierra Army Depot			
• Vint Hill Farms Station	• Activity	• Sunflower AAP			
		• Tobyhanna			
		• Army Depot			
		• Watervliet Arsenal			
	• Yuma Proving Grounds	• U.S. Army Garrison - Selfridge			
		• White Sands			
		• Missile Range			

FORSCOM:

	FY94	FY95	FY96	FY97	FY98	FY99	FY00
• Ft. Indiantown Gap	• Ft. Carson	• Ft. Drum	• Charles E. Kelly SPT Facility	• No data	• Ft. Campbell	• Ft. Bragg	
	• Ft. Dix	• Ft. Irwin			• Yakima Training Center	• Ft. Lewis	
• Ft. McPherson	• Ft. Hamilton	• Ft. Lewis	• Ft. Bragg				
	• Ft. Hood	• Ft. Stewart	• Ft. Gillem				
	• Ft. Polk	• Hunter Army Airfield	• Ft. Indiantown Gap				
	• Ft. Riley	• Yakima Training Center	• Ft. McPherson				

MDW:

	FY94	FY95	FY96	FY97	FY98	FY99
• No data	• Arlington National Cemetery	• Ft. George G. Meade	• No data	• No data	• Ft. A.P. Hill	• Ft. George G. Meade
		• Ft. Ritchie				• Ft. Myer
	• Ft. Belvoir	• Ft. Ritchie				
	• Ft. Myer	Raven Rock Site				

MEDCOM:

	FY94	FY95	FY96	FY97	FY98	FY99	FY00
• No data	• Ft. Detrick	• Walter Reed AMC	• No data	• No data	• No data	• No data	• Ft. Sam Houston
•							

TRADOC:

	FY94	FY95	FY96	FY97	FY98	FY99	FY00
• Ft. Gordon	• Ft. Benning	• Ft. Chaffee	• Ft. Gordon	• Ft. Jackson	• Ft. Eustis	• Ft. Bliss	
• Ft. Lee	• Ft. Bliss	• Ft. McClellan	• Ft. Knox		• Ft. Gordon	• Ft. Gordon	
•	• Ft. Huachuca	• Ft. Monroe			• Ft. Knox	• Ft. Knox	
	• Ft. Jackson	• Ft. Ord			• Ft. Monroe	• Ft. Monroe	
	• Ft. Leonard	• Ft. Sill			• Ft. Sill	• Ft. Sill	
	Wood	• Presidio of Monterey			• Ft. Story	• Ft. Story	
	• Ft. Rucker						

USARPAC:

	FY94	FY95	FY96	FY97	FY98	FY99
• No data	• No data	• Ft. Richardson • Ft. Greely • Ft. Wainwright	• Ft. Richardson • Ft. Greely • Ft. Wainwright	• No data	• No data	• Aliamanu Mil Res
•						• Ft. De Russy
						• Ft. Richardson
						• Ft. Shafter
						• Ft. Greely
						• Ft. Wainwright
						• Pohakulo
						• Training Area
						• Schofield
						• Barracks
						• Tripler Army
						• Med. Center
						• Wheeler Army
						• Airfield

USMA:

	FY94	FY95	FY96	FY97	FY98	FY99
• No data	• No data	• U.S. Army Military Academy	• No data	• No data	• No data	• U.S. Army Military Academy

Counting of individual facilities/installations was done by the FFID number.

Appendix B: Definitions for Fields in ACCESS Database

- FFID - Federal Facility ID Number
- NAME - Name of the facility/installation assessed
- MACOM - Name of Major Army Command the facility/installation belongs to.
Options in this field include:

AMC TRADOC

FORSCOMM **USARC**

MEDCOM USARPAC

MDW USMA

- MUSARC - used for Reserve facilities for additional identification
- CITY - location for facility/installation assessed
- STATE - location for the facility/installation assessed
- COUNTRY - country of the facility/installation assessed
- FISCAL YEAR - FY the assessment was conducted
- ASSESSMENT DATE - dates the assessment occurred
- FINDING ID - number used as a unique record identifier
- LAW/REG - identifies the law/statute that is the authority for the noncompliance finding. Options in this field include:

Code: Definition:

CAA Clean Air Act

CURL Cultural Resources

CWA Clean Water Act

ESA Endangered Species Act

EPCRA Emergency Planning and Community Right-To-Know Act

FIFRA Federal Insecticide, Fungicide, and Rodenticide Act

MULT Multiple

NATR Natural Resources

NCA Noise Control Act

NEPA National Environmental Protection Act

NHPA National Historic Preservation Act

OSHA Occupational Safety and Health Act

PRVN Pollution Prevention

RCRA-C Resource Conservation and Recovery Act, Subpart C

RCRA-D Resource Conservation and Recovery Act, Subpart D

RCRA-I Resource Conservation and Recovery Act, Subpart I

SDWA Safe Drinking Water Act

SFND Superfund

TSCA Toxic Substances Control Act

- **MANUAL SECTION** - identifies which section of the TEAM Guide or associated Supplement the finding was written under.

Manual Section:

Question Number Prefix:

Air Emissions

AE

Cultural Resources

CR

Hazardous Materials

Hazardous Waste	HW
Natural Resources	NR
Other Env. Issues, NEPA	O1
Other Env Issues, Noise	O2
Other Env. Issues, IRP	O3
Other Env. Issues, P2	O4
Other Env Issues, Program Mgt.	O5
Pesticides	PM
POL Management	PO
Solid Waste	SO
Storage Tanks	ST
Toxic Substances, PCB	T1
Toxic Substances, Asbestos	T2
Toxic Substances, Radon	T3
Toxic Substances, LBP	T4
Wastewater	WA
Water Quality	WQ

- **QUESTION NUMBER** - The checklist item number from U.S. TEAM Guide and/or its affiliated Supplements.
- **QUESTIONABLE FINDING** - Indicates that this finding is questionable. The reason it is questionable is listed in the REASON FOR QUESTIONABLE field.

- REASON FOR QUESTIONABLE - Indicates why the finding is questionable. These reason are as follows:

Q1 - Findings for a specific installation/facility are written under regulations relating to more than one size of hazardous waste generator. The text of the finding does not document actual generator status

Q2 - Findings for a specific installation/facility are written under regulations relating to both hazardous waste generator and TSDFs. The text of the finding does not document actual generator status or TSDF status.

Q3 - The regulation cited is not relevant for the description provided in the text of this finding.

Q4 - The positive finding does not indicate the installation/facility has gone above and beyond regulatory requirements or that they have shown extraordinary initiative and innovation.

Q5 - The finding combines Class 1/HS and Class 3 regulatory requirements into one finding.

- POSITIVE/NEGATIVE - indicates whether the finding was positive, negative, or a false positive.
- CLASS - indicates whether the finding is Class 01, 02, 03, HS. For the purposes of this database Class 1 is any finding based on a Federal, state, or local regulations. Class 2 findings are those that have a compliance date after the date of the assessment. Classes 3 are based on Agency/DOD requirements and/or management practices. Class HS is based on a health and safety requirement that is not fundable with environmental funds.
- CORRECTED - when entered, indicates when the noncompliance was corrected. This field being empty is not a definite indicator that noncompliance has not been corrected.
- REPEAT - indicates if the finding is a repeat of a finding in a previous assessment.
- COST - estimated cost to attain compliance.
- TENANT NAME - used when a tenant is assessed at a larger facility
- LOCATION - where the noncompliance is occurring.
- FINDING SUMMARY - short summary of what was wrong

- ROOTCODE - root cause codes. Options for this field include:

Materials:

M1 - Supply

M2 - Poor Quality

Personnel:

P1 - Awareness of Requirement

P2 - Understanding

P3 - Not Conscientious (deals with attitude of personnel)

P4 - Result v. Action (The result did not equal the action taken. Procedures were followed that should have produced a favorable result but did not.)

P5 - Accountability Not Assigned

P6 - Action v. Procedure (correct procedure(s) in place but incorrect action taken)

P7 - Insufficient Skills

P8 - Inexperience (not an attitude of personnel)

Equipment:

E1 - Controls Failure

E2 - Inadequate Facility Design

E3 - Monitoring Equipment Failure

E4 - Poor Maintenance

Techniques:

T1 - Time to Do the Job

T2 - No Procedures in Place

T3 - Priority Conflict

T4 - Inadequate Procedures

T5 - Procedures Not Available

- CRITERIA - text of the requirement, including regulatory citation, from the TEAM Guide or affiliated supplements.
- FINDING DESCRIPTION - the details of noncompliance.
- SUGGESTED SOLUTIONS - assessor provided guidance on how to attain compliance.
- CORRECTIVE ACTION - actions taken toward compliance.
- FINDING COMMENT - additional comments
- CORRECTIVE ACTION COMMENT - additional comments on corrective actions.
- BRANCH - indicates which branch of the service the data came from.

AA - Active Army

USARC - Army Reserves

ARNG - Army National Guard

- KEY WORD INDEX - index terms to allow for a narrower search of the data.

Appendix C: Keyword Index

Aboveground Storage Tank – use AST
Accumulation Point
Aerosol Cans
Air Pollution Control Device
Air Quality
Antifreeze
AR/DOD – used to identify findings based on an AR, DODI, or DODD citation.
Archeological Resources
Asbestos
AST (aboveground storage tank)
Automobile Air Conditioning – use MVAC
Backflow Prevention Device
Ballasts
BASH – Bird Air Strike Hazard Program
Batteries – term is used for all types of batteries
Berm – use SECONDARY CONTAINMENT
Biennial Report – use REPORTING REQUIREMENTS
Biomonitoring – used for Whole Effluent Toxicity testing of WWTP effluent
Blast Facility
Boilers
Brakes
Budget Process
Building – use of an unsuitable building
Capacitor
Cathodic Protection
Cemetery
CVWF – Central Vehicle Wash Facility
Central washrack – see CVWF
CFC
Chlorination Facility
Chemical Analysis
Cleanup
Closure

Coastal Zone
Coliform
Communication Equipment
Community Relations
Community Right To Know – use EPCRA
Community Water System – use POTABLE WATER SYSTEM
Compaction – i.e., landfill operation
Complaint Investigation System
Compliance Agreement
Compost
Composting Toilet
Compressed Gas
Construction Activity (re NPDES stormwater permits)
Construction/Demolition Waste
Consultation
Container – condition of waste storage container
Container Management
Contaminated Dry Sweep – use SPILL RESPONSE MATERIALS
Contaminated Soil
Contract
Cooling Water
Cross Connection Program – use CROSS-CONNECTION
Cross-Connection
Cultural Resources
Curation Facilities
CX – Categorical Exclusion
Cylinders – *if* appropriate, use COMPRESSED GAS instead
Decontamination Facilities
Degreaser – equipment, not cleaning compounds
Demolition
Design Criteria – a structural or equipment requirement
Dike – use SECONDARY CONTAINMENT
Dilution
Dining Facilities
Disinfection
Discharge – the deliberate release of a substance into the air, water, or soil.
Disposal

Documentation – if the issue is “required records are not kept onsite,” use “Record-keeping”; if the issue is “required information of some form is not submitted to a required person/agency” use “Reporting Requirements”

Dredging

Drinking Water – use Potable Water System

Drip Pan – use Secondary Containment

Drums

Drycleaning

Dumpsite

Dumpster – “dumpster” or other solid waste storage container

Dust Control

EA – Environmental Assessment as related to NEPA

Earthen Dike – use SECONDARY CONTAINMENT

EIS – Environmental Impact Statement

Electric Arc Furnace

Emergency Planning – use for “Contingency Plan”

Emergency Planning Commission – use EMERGENCY PLANNING

Emergency Response Equipment

Emergency Response Team

Emission Controls

Emission Sources

Endangered/Protected Species

Environmental Justice

Environmental Noise

EPCRA

EQCC

Erosion

Exception Report – use REPORTING REQUIREMENTS

Excess Materials

Exercise Plan

Facility Response Plan

Fence – use Security

Filling Station – use FUEL DISPENSING FACILITY

Filters

Filtration

Fire Control

Firing Range

Fish and wildlife – See Wildlife Management

Flammable Storage

Flammable Storage Cabinet – use FLAMMABLE STORAGE
Flammable Storage Container – use FLAMMABLE STORAGE
Flocculation
Floodplain
Fluorescent Lightbulbs
Fluoridation
Followup Inspection – use INSPECTION
Food Waste
Forestry
FOTW – use TREATMENT WORKS
Freon – use CFC
Fuel – used instead of MOGAS or Gasoline
Fuel Dispensing Facility – used for fuel dispensing of any kind, MOGAS, diesel, or aircraft fuel (i.e., gas stations, service stations, etc.)
Fuel Dispensing – refers to vehicle refueling from tankers, fueling operations, fueling areas, etc.
Fuel Filter
Fugitive Dust – use FUGITIVE EMISSIONS
Fugitive Emissions
Fugitive Particulate Emissions – use FUGITIVE EMISSIONS
Gasoline – use FUEL
Generator – use only for power generators - not generators of hazardous waste
Grease
Grease Interceptor – use GREASE TRAP
Crease Trap
Ground Water
Habitat Management
Halon
Hazardous Air Pollutant
Hazardous Materials Storage
Hazardous Waste Storage
HAZCOM
HAZWOPER – use Training
Heating Oil Tank
Historic Preservation
Household Hazardous Waste
Housekeeping
Ice
ICUZ – Installation Compatible Use Zone

Illegal Dumping
Incinerator
Incinerator Ash
Incompatibles
Indoor Air Quality
Industrial Waste Treatment Plant – use TREATMENT WORKS
Industrial Wastewater
Infectious Waste
I&I – inflow & infiltration
Inspection
Installation Compatible Use Zone – Use ICUZ
Installation On-scene Coordinator (IOSC)
Installation Response Team – use SPILL RESPONSE TEAM
Installation Restoration Program
Interstitial Monitoring Equipment
Inventory
IOSC – installation on-scene coordinator
IRP – use CLEANUP
ISCP – Installation Spill Contingency Plan (an AR/DOD requirement)
ITAM
Labeling
Laboratory
Land Application
Land Management
Landfill
Landfill Closure
Landfill Cover
Landfill Gas
Landscape
LBP – use LEAD-BASED PAINT
Leachate
Leach Field – if referring to domestic sewage - see SEPTIC SYSTEM
Lead-Based Paint
Leak – use RELEASE
Leak Detection
Liquid Petroleum Products – use POL
Litter
Loading Area – referring to loading/unloading facilities, areas, or operations for rail-road cars, coal piles, tank trucks, etc.

Log – use RECORDKEEPING

Maintenance

Management – organizational or management deficiency

Management Practice

Manifests

Maximum Contaminant Levels

Medical Monitoring

Medical Waste

Mess Hall – use DINING FACILITIES

Minimization

Mitigation Measure

Mixed Waste – i.e., radioactive and hazardous waste

Mobile Tanks

Modification

MOGAS – use FUEL

Monitoring

Monitoring Wells

MSDS

Munitions – improper storage or handling of munitions and related products or residue
due

MVAC

National Register

Native American

NEPA

Neutralization

Nickel-Cadmium Batteries – use BATTERIES

Noncommunity Water System – use POTABLE WATER SYSTEM

Notification – use REPORTING REQUIREMENTS

NOV – Notice of violation

NOx

NPDES

NPL (National Priorities List)

OB/OD

Occupational Health Assessment Program

Odor

Off Road Vehicle

Oil

Oil Dry – use SPILL RESPONSE MATERIALS

Oil Filter

Oil Sheen
Oil Soaked Rag – use OILY RAGS
Oil-based Paint
Oil/Water Separator
Oily Rags
Opacity
Open Burn Pit – use OPEN BURNING
Open Burning (for trash)
Open Detonation – use OB/OD
Open Dump
Operation & Maintenance – use O&M
Operations Manual
Operator
Ordnance
Overfill Prevention
Oxygen Cylinder – use COMPRESSED GAS
Ozone Depleting Chemicals
P2 Opportunity
Paint Booth
Particulates
Parts Washer – use DEGREASER
PCBs
Permit
Pesticide Applications
Pesticide Applicators
Pesticide Mixing Area
Pesticides
Photo Lab
Pinkwater
Plans
Point Source Discharge
POL – petroleum, oils, and lubricants
POL storage
POL Transfer Facility
Potable Water Storage Tank
Potable Water Well
Potable Water Treatment
POTW – use TREATMENT WORKS
PPE

Procurement

Program Management – use to describe issues such as poor internal communication, complete lack of a program, poor internal processes

Programmatic Agreement

Propane Cylinder – use COMPRESSED GAS

Protected Species – see Endangered/Protected Species

QRP (Qualified Recycling Program)

Radon

REC – Record of Environmental Consideration

Recordkeeping

Recreation

Recycling

Red Bag Waste – use MEDICAL WASTE

Refrigerant Recovery Equipment

Registration

Regulated Medical Waste – use MEDICAL WASTE

Regulation – This is used to identify findings based on Federal, state, or local regulations.

Regulatory Library – This is used to identify findings mandating facilities/installations to keep a library of environmental regulations.

Release – an accidental spill or leak

Release Detection

Reporting Requirements

Reservoirs

Restoration

Restricted Use Pesticides

Rinsings

ROWPUs – Reverse Osmosis Water Purification Units – equipment used to produce drinking water

Runoff Control

Safety

Sampling

Sandblasting

Secondary Containment

Section 106 – use HISTORIC PRESERVATION

Section 404 – use WETLANDS

Security

Segregation – separating different material or waste types

Septic System

Sewage Sludge
Sharps
Shelf Life
SHPO – State Historic Preservation Officer
Signs
Sludge – for all sludge *except* sewage sludge (see SEWAGE SLUDGE)
Soil Conservation
Solid Waste Management Plan
SPCCP
Spill – use RELEASE
Spill Response Materials
Spill Response Team
Spill/Overfill Protection
Status – hazardous waste generator status
Storage
Storage Building
Storage Cabinets
Storage Locker
Storage Shed – use STORAGE BUILDING
Storage Tank – use AST – aboveground storage tank or UST – underground storage tank when the finding indicates which one. Use storage tank when it cannot be determined.
Stormwater
SWPPP (stormwater pollution prevention plan)
Survey
Swimming pool
Tanker Truck Purging
Tier 2 – use EPCRA
Tier 1 – use EPCRA
Tires
Training
Training Activities
Transformers
Transportation
Trash
TRC – Technical Review Committee
Treated Wood
Treatment – general term for hazardous waste treatment

Treatment Works – identifies a facility and the wastewater collection system used for the processing and conveyance of industrial and/or domestic wastewater. Use WASTEWATER COLLECTION SYSTEM when the finding only refers to the collection system or components of the collection system, and not the WWTP.

Turbidity

Underground Storage Tank

UST

Universal Waste

Used Oil

Vectors

Vehicle Maintenance

Ventilation

VOCs

Washrack

Waste Characterization

Wastewater Treatment Plant – use TREATMENT WORKS

Wastewater Collection System – use WASTEWATER COLLECTION SYSTEM when

the finding refers to only the collection system or components of the collection system, and not the WWTP.

Water Cooler

Water Conservation

Water/Wastewater Reclamation – Use WATER CONSERVATION

Water Treatment Plant – use POTABLE WATER TREATMENT

Weapons Cleaning

Wellhead Protection Program

Wetlands

White Goods

Wildlife Management

Woodworking

X-Ray Lab – X-ray film processing facility or operations; X-ray developing room

Yard Waste

Appendix D: Trends by Legislative Authority

Trends for the Active Army, Army Reserve, and Army National Guard

Authority	Active Army	Army Reserve	Army Guard
Clean Air Act	683	426	82
Cultural Resources	160	27	3
Clean Water Act	1539	831	751
Endangered Species Act	29	15	3
EPCRA	54	26	1
FIFRA	768	74	36
Multiple	314	284	4
Natural Resources	307	50	51
Noise Control Act	168	219	16
NEPA	249	83	65
National Historic Preservation Act	172	57	65
OSHA	1033	1360	15
Pollution Prevention	94	82	8
RCRA-C	1536	893	628
RCRA-D	570	311	84
RCRA-I	447	125	134

Authority	Active Army	Army Reserve	Army Guard
Safe Drinking Water Act	705	107	6
Superfund	52	70	20
TSCA	231	564	5

Trends for Active Army Major Commands

Authority	AMC	TRA-DOC	FORS-COM	MDW	MED-COM	USAR-PAC	USMA
Clean Air Act	207	219	222	58	27	36	20
Cultural Resources	22	37	69	20	9	13	6
Clean Water Act	331	439	639	112	61	77	21
Endangered Species Act	9	10	8	1	1	0	0
EPCRA	20	15	12	5	0	1	0
FIFRA	172	176	216	81	45	43	10
Multiple	59	67	67	41	10	28	14
Natural Resources	74	64	110	16	11	16	5
Noise Control Act	25	39	76	6	0	18	0
NEPA	111	48	57	7	6	12	2
National Historic Preservation Act	76	15	52	9	5	5	3
OSHA	82	361	296	124	54	58	35
Pollution Prevention	16	19	31	5	2	17	0
RCRA-C	237	384	687	90	32	45	27
RCRA-D	66	171	219	43	17	33	20

Authority	AMC	TRA-DOC	FORS-COM	MDW	MED-COM	USAR-PAC	USMA
RCRA-I	89	98	195	18	10	22	3
Safe Drinking Water Act	125	195	179	69	35	45	17
Superfund	12	8	23	2	0	5	2
TSCA	88	46	47	11	5	22	5

Appendix E: Top Three Findings Across Fiscal Years 1994–2000 by Topic for the Active Army

FORSCOM	
Topic	Finding
Air Emissions Mgt.	<ol style="list-style-type: none"> 1. Noncompliance with state and local regulations (AE.3.1) <i>Class 1</i> (i.e., open burning; permits; cold cleaner degreaser lids) 2. No or inadequate signs on fuel pumps (AE.55.2) <i>Class 1</i> 3. No or incomplete quarterly CFC procurement report (AE.85.1.A) <i>Class 1</i> 3. Inadequate training for mechanics on freon recovery equipment (AE.90.1) <i>Class 1</i>
Cultural Resources Mgt.	<ol style="list-style-type: none"> 1. No or inadequate historic properties survey/National Register (CR.5.1) <i>Class 1</i> 2. Inadequate management of historic properties affected by undertakings (CR.5.3) <i>Class 1</i> 3. Inadequate historic preservation plan (CR.5.1.A) <i>Class 3</i>
Hazardous Materials Mgt.	<ol style="list-style-type: none"> 1. Improper storage of compressed gas cylinders (HM.45.1) <i>HS</i> 2. Containers of hazardous materials are not correctly labeled, tagged, or marked (HM.1.3) <i>HS</i> 3. No or incomplete MSDSs (HM.1.2) <i>HS</i> 3. No or inadequate written hazard communication program (HM.10.1) <i>HS</i>
Hazardous Waste Mgt.	<ol style="list-style-type: none"> 1. Inadequate waste determination (HW.10.1) <i>Class 1</i> 2. SAP/accumulation point limits exceeded (HW.75.1) <i>Class 1</i> 3. Noncompliance with state and local regulations (HW.3.1) (i.e., training records; 90-day limit exceeded; satellite accumulation points; labeling; unknown waste) <i>Class 1</i>

FORSCOM	
Topic	Finding
Natural Resources Mgt.	<ol style="list-style-type: none"> 1. No or inadequate INRMP (NR.1.3.A) <i>Class 1</i> 2. Insufficient vegetative cover to control dust and erosion damage (NR.10.9.A) <i>Class 3</i> 3. No or inadequate survey of endangered and threatened species (NR.20.1) <i>Class 1</i>
Other Environmental Issues: NEPA	<ol style="list-style-type: none"> 1. EA not produced when required (O1.5.2) <i>Class 1</i> 2. NEPA implementation activities not executed (O1.1.3.A) <i>Class 1</i> 3. EA does not contain required information (O1.5.20) <i>Class 1</i>
Other Env. Issues: Noise	<ol style="list-style-type: none"> 1. No or incomplete ICUZ study (O2.1.3.A) <i>Class 3</i> 2. No or inadequate ICUZ committee (O2.1.4.A) <i>Class 3</i> 3. No or incomplete operational data on noise producing activities (O2.1.9.A) <i>Class 3</i>
Other Env. Issues: IRP	<ol style="list-style-type: none"> 1. Noncompliance with state and local regulations (O3.3.1) (i.e., USTs; contaminated soil) <i>Class 1</i> 2. Inadequate removal site evaluation (O3.1.2) <i>Class 1</i> 3. Inadequate screening for past use of hazardous substances (O3.1.3.A) <i>Class 3</i> 3. Inadequate community relations activities (O3.10.2) <i>Class 1</i>
Other Env. Issues: P2	<ol style="list-style-type: none"> 1. Pollution prevention plan inadequate or incomplete (O4.5.1) <i>Class 1</i> 2. Hazardous materials management is not considered an integral part of hazardous waste minimization (O4.10.2.A) <i>Class 3</i> 3. Inadequate implementation of P2 recommendations (O4.1.9.A) <i>Class 3</i> 3. Inadequate consideration of P2 initiatives (O4.5.2) <i>Class 1</i>
Other Env. Issues: Program Mgt.	<ol style="list-style-type: none"> 1. Insufficient funding and staffing (O5.6.1.A) <i>Class 3</i> 2. No or inadequate EQCC (O5.1.6.A) <i>Class 3</i> 3. Inadequate environmental training (O5.7.1.A) <i>Class 3</i>
Pesticides Mgt.	<ol style="list-style-type: none"> 1. No comprehensive IPMP (PM.1.4.A) <i>Class 3</i>

FORSCOM	
Topic	Finding
	<ol style="list-style-type: none"> 1. Inadequate pesticide storage facility (PM.45.4.A) <i>Class 3</i> 3. No or inadequate pest management coordinator (PM.1.3.A) <i>Class 3</i> 3. Inadequate pesticide mixing/storage sites (PM.45.3.A) <i>Class 3</i> 3. No or inadequate spill control kits (PM.45.8.A) <i>Class 3</i>
POL Mgt.	<ol style="list-style-type: none"> 1. Discharge of oil into or upon navigable waters (PO.15.1) <i>Class 1</i> 2. No or inadequate spill containment and cleanup materials (PO.20.1) <i>Class 1</i> 3. No "USED OIL" label on containers other than tanks (PO.65.6) <i>Class 1</i>
Solid Waste Mgt.	<ol style="list-style-type: none"> 1. Noncompliance with state and local regulations (SO.3.1) (i.e., open dumping; waste tire storage; biomedical/biohazardous waste; permits; condition of dumpsters; grease storage; training) <i>Class 1</i> 2. Inadequate participation in state/local recycling programs (SO.25.1.A) <i>Class 3</i> 3. Lack of segregation of recyclable materials from solid waste (SO.10.1) <i>Class 1</i>
Storage Tanks Mgt.	<ol style="list-style-type: none"> 1. Lack of "used oil" label on ASTs (ST.125.1) <i>Class 1</i> 2. Lack of spill overfill protection for substandard USTs (ST.30.1.A) <i>Class 3</i> 3. Substandard USTs not upgraded, closed, or removed (ST.25.1) <i>Class 1</i>
Toxic Substances, PCB	<ol style="list-style-type: none"> 1. No or inadequate annual PCB document log (T1.15.1) <i>Class 1</i> 2. Inadequate PCB items storage areas (T1.40.2) <i>Class 1</i> 3. Inadequate >50 ppm PCBs and PCB items storage areas (T1.40.1) <i>Class 1</i>
Toxic Substances, Asbestos	<ol style="list-style-type: none"> 1. No or incomplete asbestos survey (T2.1.3.A) <i>Class 3</i> 2. No or incomplete Installation Asbestos Management Plan (T2.1.4.A) <i>Class 3</i>

FORSCOM	
Topic	Finding
	<p>3. Improper disposal of asbestos containing material (T2.15.1) <i>Class 1</i></p>
Toxic Substances, Radon	<p>1. Noncompliance with state and local regulations (T3.3.1) (i.e., radon reduction program incomplete) <i>Class 1</i></p> <p>2. No or inadequate mitigation of structures (T3.1.12.A) <i>Class 3</i></p>
Toxic Substances, LBP	<p>1. Noncompliance with state and local regulations (T4.3.1) (i.e., no lead hazard management program) <i>Class 1</i></p>
Wastewater Mgt.	<p>1. Noncompliance with state and local regulations (WA.3.1) (i.e., unpermitted discharges; NPDES permit violations; review of sanitary sewer service agreements; improper operation and maintenance of treatment systems; inadequate secondary containment; permit limits exceeded; sludge removal records not maintained; inadequate implementation of stormwater pollution prevention plans) <i>Class 1</i></p> <p>2. No or noncompliance with existing state/Federal NPDES for point source discharges (WA.10.1) <i>Class 1</i></p> <p>3. Discharges that would cause pass through or interference at the POTW/FOTW (WA.25.1) <i>Class 1</i></p>
Water Quality Mgt.	<p>1. Noncompliance with state and local regulations (WQ.3.1) (i.e., abandoned wells not plugged; testing/disinfection after water main repair; failure to notify public when levels exceeded; wells too close to possible source of contamination; no cross connection control program; no emergency contingency plans) <i>Class 1</i></p> <p>2. Inappropriate swimming pool operations and maintenance (WQ.4.1.A) <i>Class 3</i></p> <p>3. No SOP for alerting personnel of emergencies (WQ.1.5.A) <i>Class 3</i></p>

TRADOC	
Topic	Finding
Air Emissions Mgt.	<ol style="list-style-type: none"> 1. Noncompliance with state and local regulations (AE.3.1) (i.e., permits; open burning; cold cleaner degreaser lid not closed; inadequate emissions inventory; fugitive emissions; incinerator operator training; gasoline tanks/pumps do not meet requirements; insufficient recordkeeping; inadequate recordkeeping) <i>Class 1</i> 2. No or inadequate signs on fuel pumps (AE.55.2) <i>Class 1</i> 3. Immersion batch cold solvent cleaners left open. (AE.116.1) <i>Class 1</i>
Cultural Resources Mgt.	<ol style="list-style-type: none"> 1. No or inadequate historic properties survey/National Register (CR.5.1) <i>Class 1</i> 2. No or inadequate ICRMP (CR.5.1.A) <i>Class 1</i> 3. No or inadequate regulation of the excavation of archeological sites. (CR.15.1) <i>Class 1</i>
Hazardous Materials Mgt.	<ol style="list-style-type: none"> 1. Inadequate fire protection for flammable/combustible storage areas (HM.35.9) <i>HS</i> 2. No or incomplete MSDS (HM.1.2) <i>HS</i> 3. Inadequate flammable storage cabinets (HM.35.4) <i>HS</i>
Hazardous Waste Mgt.	<ol style="list-style-type: none"> 1. Noncompliance with state and local regulations (HW.3.1) (i.e., improper storage; uncharacterized waste) <i>Class 1</i> 2. Inadequate waste characterization (HW.10.1) <i>Class 1</i> 3. SAP/accumulation point limits exceeded (HW.75.1) <i>Class 1</i>
Natural Resources Mgt.	<ol style="list-style-type: none"> 1. No or inadequate INRMP (NR.1.3.A) <i>Class 1</i> 2. No or incomplete survey of endangered and threatened species (NR.20.1) <i>Class 1</i> 3. No or noncompliance with existing permit for discharge of dredged or fill material to waters (NR.5.1) <i>Class 1</i> 3. Floodplains and wetlands are not identified/protected (NR.10.2) <i>Class 1</i>

TRADOC	
Topic	Finding
Other Environmental Issues: NEPA	<ol style="list-style-type: none"> 1. No or incomplete preparation of an EA (O1.5.4.A) <i>Class 1</i> 2. NEPA is not integrated into planning (O1.5.1) <i>Class 1</i> 3. EA not produced when needed (O1.5.2) <i>Class 1</i>
Other Environmental Issues: Noise	<ol style="list-style-type: none"> 1. No or inadequate ICUZ study (O2.1.3.A) <i>Class 3</i> 2. No or inadequate ICUZ committee (O2.1.4.A) <i>Class 3</i> 3. No or inadequate noise complaint procedure (O2.1.10.A) <i>Class 3</i> 3. No or inadequate operational data on noise producing activities (O2.1.9.A) <i>Class 3</i>
Other Env. Issues, IRP	N/A
Other Env. Issues, P2	<ol style="list-style-type: none"> 1. Pollution prevention plan inadequate or incomplete (O4.5.1) <i>Class 1</i> 2. No or inadequate use of life cycle cost analysis. (O4.10.5.A) <i>Class 3</i>
Other Env. Issues, Program Mgt.	<ol style="list-style-type: none"> 1. Insufficient funding and staffing (O5.6.1.A) <i>Class 3</i> 2. No or inadequate EQCC (O5.1.6.A) <i>Class 3</i> 3. Inadequate training for environmental personnel (O5.7.1.A) <i>Class 3</i>
Pesticides Mgt.	<ol style="list-style-type: none"> 1. Inadequate pesticide storage facility (PM.45.4.A) <i>Class 3</i> 2. No or insufficient spill control kits (PM.45.8.A) <i>Class 3</i> 3. Noncompliance with pesticide storage requirements (PM.45.1) <i>Class 1</i>
POL Mgt.	<ol style="list-style-type: none"> 1. Insufficient spill containment and cleanup materials (PO.20.1) <i>Class 1</i> 2. Discharge of oil into or upon navigable waters (PO.15.1) <i>Class 1</i> 3. Missing "USED OIL" label on containers other than tanks (PO.65.6) <i>Class 1</i>
Solid Waste Mgt.	<ol style="list-style-type: none"> 1. Noncompliance with state and local regulations (SO.3.1) (i.e., open dumping; waste tire storage; unpermitted landfill; hazardous waste in landfill; landfill cover; landfill

TRADOC	
Topic	Finding
	<p>security; improper biomedical waste disposal; inadequate recycling; improper grease storage) <i>Class 1</i></p> <ol style="list-style-type: none"> 2. Lack of segregation of recyclable materials from solid waste (SO.10.1) <i>Class 1</i> 2. Nonparticipation in state/local recycling programs (SO.25.1.A) <i>Class 3</i>
Storage Tanks Mgt.	<ol style="list-style-type: none"> 1. No or inadequate secondary containment for bulk storage tanks (ST.5.1) <i>Class 1</i> 1. UST, no prevention of overfilling and spilling (ST.45.1) <i>Class 1</i> 3. Inadequate UST closure (ST.95.3) <i>Class 1</i>
Toxic Substances, PCB	<ol style="list-style-type: none"> 1. Inadequate PCB items storage areas (T1.40.2) <i>Class 1</i> 2. No ML markings for PCB equipment (T1.10.2) <i>Class 1</i> 3. Inadequate PCB shipping containers. (T1.40.5) <i>Class 1</i>
Toxic Substances, Asbestos	<ol style="list-style-type: none"> 1. No or inadequate asbestos survey (T2.1.3.A) <i>Class 3</i> 2. No or incomplete identification of the existence, extent and condition of all asbestos (T2.1.6.A) <i>Class 3</i> 3. No or inadequate Installation Asbestos Management Plan (T2.1.4.A) <i>Class 3</i>
Toxic Substances, Radon	N/A
Toxic Substances, LBP	<ol style="list-style-type: none"> 1. No or inadequate LBP Management Program (T4.1.3.A) <i>Class 3</i> 2. No or inadequate notification of housing occupants of potential LBP hazards. (T4.10.1) <i>Class 1</i>
Wastewater Mgt.	<ol style="list-style-type: none"> 1. Noncompliance with state and local regulations (WA.3.1) (i.e., violations of pretreatment standards; unpermitted discharges; inadequate implementation of stormwater pollution prevention plan; open floor drains; oil/water separator maintenance; oil water separator discharges; noncompliance with discharge permits; inadequate spill containment) <i>Class 1</i> 2. No or noncompliance with existing state/Federal NPDES

TRADOC	
Topic	Finding
	<p>for point source discharges (WA.10.1) <i>Class 1</i></p> <p>3. Introduction of pollutants into POTW/FOTW (WA.25.2) <i>Class 1</i></p>
Water Quality Mgt.	<ol style="list-style-type: none">1. Noncompliance with state and local regulations (WQ.3.1) (i.e., wells located near contamination source; abandoned wells not plugged; no cross connection control program; inadequate maintenance/training) <i>Class 1</i>2. Inadequate swimming pool operations and maintenance (WQ.4.1.A) <i>Class 3</i>3. No SOP for alerting personnel of emergencies (WQ.1.5.A) <i>Class 3</i>

AMC	
Topic	Finding
Air Emissions Mgt.	<ol style="list-style-type: none"> 1. Noncompliance with state and local regulations (AE.3.1) (i.e., unpermitted sources; incomplete permits; outdated permits; inadequate recordkeeping; noncompliance with permit requirements) <i>Class 1</i> 2. Inadequate refrigeration recovery and recycling equipment (AE.90.5) <i>Class 1</i> 3. No or inadequate Title V permit/air emissions inventory (AE.1.2) <i>Class 1</i>
Cultural Resources Mgt.	<ol style="list-style-type: none"> 1. No identification of historic properties affected by undertakings (CR.5.3) <i>Class 1</i> 2. No or incomplete historic properties survey/National Register (CR.5.1) <i>Class 1</i> 3. CRMO not designated/training inadequate (CR.1.3.A) <i>Class 3</i> 3. No or inadequate preparation and implementation of an HPP. (CR.5.1.A) <i>Class 3</i>
Hazardous Materials Mgt.	<ol style="list-style-type: none"> 1. Improper storage of compressed gas cylinders (HM.45.1) <i>HS</i> 2. Extremely hazardous substances present/LEPC (HM.25.1) 3. Noncompliance with SARA III requirements. (HM.30.1) <i>Class 1</i>
Hazardous Waste Mgt.	<ol style="list-style-type: none"> 1. Noncompliance with state and local regulations (HW.3.1) (i.e., inadequate labeling; unregistered accumulation points; inadequate secondary containment; submission of incomplete reports; incompatible storage; outdated contingency plans) <i>Class 1</i> 2. SAP/accumulation point limits exceeded (HW.75.1) <i>Class 1</i> 3. 90-day limit exceeded on storage of hazwaste (HW.55.1) <i>Class 1</i>

AMC	
Topic	Finding
Natural Resources Mgt.	<ol style="list-style-type: none"> 1. No or inadequate INRMP (NR.1.3.A) <i>Class 1</i> 2. Land management operations not consistent with modern conservation and land use principles (NR.10.7.A) <i>Class 3</i> 3. No or inadequate survey of endangered and threatened species (NR.20.1) <i>Class 1</i>
Other Environmental Issues: NEPA	<ol style="list-style-type: none"> 1. Inadequate preparation of an EA (O1.5.4.A) <i>Class 1</i> 2. Categorical exclusions (O1.5.3.A) <i>Class 1</i> 3. EAs not reviewed as action continues (O1.5.7.A) <i>Class 1</i>
Other Env. Issues: Noise	<ol style="list-style-type: none"> 1. No or incomplete ICUZ study (O2.1.3.A) <i>Class 1</i> 2. No or inadequate noise complaint procedure (O2.1.10.A) <i>Class 3</i> 3. No or inadequate ICUZ committee (O2.1.4.A) <i>Class 3</i>
Other Env. Issues: IRP	<ol style="list-style-type: none"> 1. No or inadequate removal site evaluation (O3.1.2) <i>Class 1</i> 2. Noncompliance with state and local regulations. (O3.3.1) (i.e., noncompliance with remediation schedule) <i>Class 1</i>
Other Env. Issues: P2	<ol style="list-style-type: none"> 1. No or incomplete master listing of all hazardous substances (O4.10.1.A) <i>Class 3</i> 2. Inadequate pollution prevention plan. (O4.1.4.A) <i>Class 3</i> 3. Pollution prevention plan inadequate or incomplete (O4.5.1) <i>Class 1</i>
Other Env. Issues: Program Mgt.	<ol style="list-style-type: none"> 1. No or inadequate EQCC (O5.1.6.A) <i>Class 3</i> 2. No or inadequate training for environmental personnel (O5.7.1.A) <i>Class 3</i> 3. Insufficient funding and staffing (O5.6.1.A) <i>Class 3</i>
Pesticides Mgt.	<ol style="list-style-type: none"> 1. No comprehensive IPMP (PM.1.4.A) <i>Class 3</i> 2. Pest control contracts are not adequately reviewed and approved (PM.1.7.A) <i>Class 3</i> 3. Inadequate pesticide mixing/storage sites (PM.45.3.A) <i>Class 3</i>

AMC	
Topic	Finding
POL Mgt.	<ol style="list-style-type: none"> SPCC plan inadequate (PO.5.2) <i>Class 1</i> Missing "USED OIL" label on containers other than tanks (PO.65.6) <i>Class 1</i> No or inadequate ISCP (PO.5.3.A) <i>Class 1</i>
Solid Waste Mgt.	<ol style="list-style-type: none"> Noncompliance with state and local regulations (SO.3.1) (i.e., open dumping; inadequate security; improper disposal of biomedical waste; improper disposal of asbestos waste in landfill; improper disposal of dried sludge) <i>Class 1</i> Lack of segregation of recyclable materials from solid waste (SO.10.1) <i>Class 1</i> Inadequate solid waste storage (SO.10.1.A) <i>Class 3</i>
Storage Tanks Mgt.	<ol style="list-style-type: none"> Inadequate UST release detection systems (ST.65.1) <i>Class 1</i> Noncompliance with state and local regulations (ST.3.1) (i.e., unregistered storage tanks; inadequate secondary containment; inadequate monitoring/inspection; inadequate USTs not removed) <i>Class 1</i> Inadequate secondary containment for bulk storage tanks (ST.5.1) <i>Class 1</i>
Toxic Substances, PCB	<ol style="list-style-type: none"> No or inadequate annual PCB document log (T1.15.1) <i>Class 1</i> No ML markings for PCB equipment (T1.10.2) <i>Class 1</i>
Toxic Substances, Asbestos	<ol style="list-style-type: none"> No or inadequate asbestos survey (T2.1.3.A) <i>Class 3</i> No or inadequate Installation Asbestos Management Plan (T2.1.4.A) <i>Class 3</i>
Toxic Substances, Radon	<ol style="list-style-type: none"> Incomplete radon measurements (T3.1.3.A) <i>Class 3</i>
Toxic Substances, LBP	N/A
Wastewater Mgt.	<ol style="list-style-type: none"> Noncompliance with state and local regulations (WA.3.1) (i.e., noncompliance with permit requirements; improper

AMC	
Topic	Finding
	<p>monitoring/inspection; unpermitted discharges; inadequate spill control systems; inadequate implementation of stormwater pollution prevention plan) <i>Class 1</i></p> <ul style="list-style-type: none">2. No or noncompliance with existing state/Federal NPDES for point source discharges (WA.10.1) <i>Class 1</i>3. Inadequate analytical and sampling methods (WA.10.5) <i>Class 1</i>
Water Quality Mgt.	<ul style="list-style-type: none">1. Noncompliance with state and local regulations (WQ.3.1) (i.e., incomplete records; no cross connection control program; outdated maps of distribution system; no public notification after violation; inadequate monitoring/inspection; inadequate radiological monitoring) <i>Class 1</i>

MDW	
Topic	Finding
Air Emissions Mgt.	<ol style="list-style-type: none"> 1. Noncompliance with state and local regulations (AE.3.1) (i.e., open burning; cold cleaner lid left open; incinerator operation violating state standard; noncompliance with permit requirements) <i>Class 1</i> 2. Noncompliance with CFC/refrigerant management requirements (Multiple) <i>Class 1</i>
Cultural Resources Mgt.	<ol style="list-style-type: none"> 1. No or inadequate ICRMP (CR.5.1.A) <i>Class 1</i> 2. No or inadequate historic properties survey/National Register (CR.5.1) <i>Class 1</i> 3. Inadequate long-term management of collections (Multiple) <i>Class 1</i>
Hazardous Materials Mgt.	<ol style="list-style-type: none"> 1. Hazardous materials containers are not labeled, tagged or marked (HM.1.3) <i>HS</i> 2. No or incomplete MSDSs (HM.1.2) <i>HS</i> 3. Improper storage of compressed gas cylinders (HM.45.1) <i>HS</i> 3. Inadequate flammable storage cabinets (HM.35.4) <i>HS</i>
Hazardous Waste Mgt.	<ol style="list-style-type: none"> 1. Inadequate characterization of wastes (HW.10.1) <i>Class 1</i> 2. 90-day limit exceeded on storage of haz waste (HW.55.1) <i>Class 1</i> 3. SAP/accumulation point limits exceeded (HW.75.1) <i>Class 1</i> 3. No or inadequate hazardous waste training (HW.60.1) <i>Class 1</i>
Natural Resources Mgt.	<ol style="list-style-type: none"> 1. No or inadequate INRMP (NR.1.3.A) <i>Class 1</i>
Other Environmental Issues: NEPA	N/A
Other Env. Issues: Noise	N/A
Other Env. Issues: IRP	N/A
Other Env. Issues: P2	<ol style="list-style-type: none"> 1. No or inadequate P2 program. (O4.1.14.A) <i>Class 3</i>

MDW	
Topic	Finding
Other Env. Issues: Program Mgt.	<ol style="list-style-type: none"> 1. No or inadequate environmental support agreements with tenants (O5.1.13.A) <i>Class 3</i> 2. Insufficient funding and staffing (O5.6.1.A) <i>Class 3</i> 3. Inadequate communication (Multiple) <i>Class 3</i>
Pesticides Mgt.	<ol style="list-style-type: none"> 1. Inadequate pesticide storage facility (PM.45.4.A) <i>Class 3</i> 2. No or inadequate spill control kits (PM.45.8.A) <i>Class 3</i> 3. Inadequate pesticide mixing/storage sites (PM.45.3.A) <i>Class 3</i> 3. Noncompliance with pesticide storage requirements (PM.45.1) <i>Class 1</i> 3. Unlabeled pesticide equipment (PM.45.17.A) <i>Class 3</i>
POL Mgt.	<ol style="list-style-type: none"> 1. No or insufficient spill containment and cleanup materials (PO.20.1) <i>Class 1</i> 1. Noncompliance with state and local regulations (PO.3.1) (i.e., inadequate secondary containment; unpermitted discharge) <i>Class 1</i> 2. Missing "USED OIL" label on containers other than tanks (PO.65.6) <i>Class 1</i>
Solid Waste Mgt.	<ol style="list-style-type: none"> 1. Noncompliance with state and local regulations (SO.3.1) (i.e., open dumping; improper disposal of solid sludge; waste tire storage; inadequate inspections at landfill) <i>Class 1</i> 2. Lack of segregation of recyclable materials from solid waste (SO.10.1) <i>Class 1</i> 3. Inadequate solid waste storage (SO.10.1.A) <i>Class 3</i>
Storage Tanks Mgt.	<ol style="list-style-type: none"> 1. Noncompliance with state and local regulations (ST.3.1) (i.e., unregistered storage tanks; inadequate UST labeling) <i>Class 1</i> 2. Inadequate secondary containment for bulk storage tanks (ST.5.1) <i>Class 1</i>
Toxic Substances, PCB	<ol style="list-style-type: none"> 1. No or inadequate PCB inventory. (T1.10.1) <i>Class 1</i>

MDW	
Topic	Finding
Toxic Substances, Asbestos	<ol style="list-style-type: none"> 1. No or inadequate Installation Asbestos Management Plan (T2.1.4.A) <i>Class 3</i> 2. No or inadequate asbestos survey. (T2.1.3.A) <i>Class 3</i>
Toxic Substances, Radon	N/A
Toxic Substances, LBP	N/A
Wastewater Mgt.	<ol style="list-style-type: none"> 1. Noncompliance with state and local regulations (WA.3.1) (i.e., unpermitted discharge; visible spill; incomplete stormwater pollution prevention plan; inadequate secondary containment) <i>Class 1</i> 2. Discharges that would cause pass through or interference at the POTW/FOTW (WA.25.1) <i>Class 1</i> 3. Introduction of pollutants into POTW/FOTW (WA.25.2) <i>Class 1</i>
Water Quality Mgt.	<ol style="list-style-type: none"> 1. Noncompliance with state and local regulations (WQ.3.1) (i.e., no cross connection control program; no contingency plan; inadequate monitoring/inspection; incomplete recordkeeping) <i>Class 1</i> 2. Inadequate swimming pool operations and maintenance (WQ.4.1.A) <i>Class 3</i> 3. No or inadequate records of actions taken to correct or repair the distribution system (WQ.1.3.A) <i>Class 3</i>

MEDCOM	
Topic	Finding
Air Emissions Mgt.	<ol style="list-style-type: none"> 1. Noncompliance with state and local regulations (AE.3.1) (i.e., unpermitted sources; cold cleaner lids left open; no vehicle emission testing) <i>Class 1</i> 2. No certification of recycling and recovery equipment. (AE.90.1) <i>Class 1</i>
Cultural Resources Mgt.	<ol style="list-style-type: none"> 1. No or inadequate historic properties survey/National Register (CR.5.1) <i>Class 1</i> 2. No or inadequate ICRMP (Multiple) <i>Class 1</i>
Hazardous Materials Mgt.	<ol style="list-style-type: none"> 1. Hazardous materials containers are not labeled, tagged or marked (HM.1.3) <i>HS</i> 2. Improper storage of compressed gas cylinders (HM.45.1) <i>HS</i> 3. Inadequate housekeeping in hazardous material storage areas. (HM.1.4) <i>HS</i>
Hazardous Waste Mgt.	<ol style="list-style-type: none"> 1. Noncompliance with state and local regulations (HW.3.1) (i.e., uncharacterized waste; improper management of hazardous waste containers; discharge to sanitary sewer) <i>Class 1</i> 2. Inadequate characterization of wastes (HW.10.1) <i>Class 1</i> 3. Inadequate hazardous waste storage area. (HW.80.4) <i>Class 1</i>
Natural Resources Mgt.	<ol style="list-style-type: none"> 1. No or inadequate INRMP (NR.1.3.A) <i>Class 1</i> 2. No or inadequate Endangered Species Management Plan (NR.20.2.A) <i>Class 3</i> 3. Inadequate natural resources law enforcement personnel (NR.1.16.A) <i>Class 3</i>
Other Environmental Issues: NEPA	<ol style="list-style-type: none"> 1. Inadequate integration of NEPA into planning. (O1.5.2.A) <i>Class 1</i>
Other Env. Issues: Noise	N/A

MEDCOM	
Topic	Finding
Other Env. Issues: IRP	N/A
Other Env. Issues: P2	<ol style="list-style-type: none"> 1. Inadequate procurement of recycle content products (O4.6.1) <i>Class 1</i>
Other Env. Issues: Program Mgt.	<ol style="list-style-type: none"> 1. Insufficient funding and staffing (O5.6.1.A) <i>Class 3</i> 2. Inadequate communication (Multiple) <i>Class 3</i>
Pesticides Mgt.	<ol style="list-style-type: none"> 1. Inadequate pesticide storage (PM.45.1) <i>Class 1</i> 2. No DD Form 1532 completed (PM.1.6.A) <i>Class 3</i> 2. Unlabeled pesticide equipment (PM.45.17.A) <i>Class 3</i>
POL Mgt.	<ol style="list-style-type: none"> 1. Noncompliance with state and local regulations (PO.3.1) (i.e., inadequate labeling; visible spills; inadequate recordkeeping) <i>Class 1</i> 2. Insufficient spill containment and cleanup materials (PO.20.1) <i>Class 1</i>
Solid Waste Mgt.	<ol style="list-style-type: none"> 1. Lack of participation in state/local recycling programs (SO.25.1.A) <i>Class 3</i> 1. Lack of segregation of solid waste from medical waste (SO.110.4) <i>Class 1</i>
Storage Tanks Mgt.	<ol style="list-style-type: none"> 1. Noncompliance with state and local regulations (ST.3.1) (i.e., unregistered storage tanks; inadequate inspection) <i>Class 1</i> 1. Inadequate secondary containment for bulk storage tanks (ST.5.1) <i>Class 1</i>
Toxic Substances, PCB	N/A
Toxic Substances, Asbestos	<ol style="list-style-type: none"> 1. No or inadequate asbestos survey (T2.1.3.A) <i>Class 3</i> 2. No or inadequate asbestos management plan (T2.1.4.A) <i>Class 3</i>
Toxic Substances, Radon	N/A

MEDCOM	
Topic	Finding
Toxic Substances, LBP	<ol style="list-style-type: none">1. No or inadequate notification of housing occupants of potential LBP hazards (T4.10.1) <i>Class 1</i>
Wastewater Mgt.	<ol style="list-style-type: none">1. Noncompliance with state and local regulations (WA.3.1) (i.e., unpermitted discharge; noncompliance with permit requirements; inadequate secondary containment) <i>Class 1</i>2. Discharges that would cause pass through or interference at the POTW/FOTW (WA.25.1) <i>Class 1</i>3. Introduction of pollutants into POTW/FOTW (WA.25.2) <i>Class 1</i>
Water Quality Mgt.	<ol style="list-style-type: none">1. Noncompliance with state and local regulations (WQ.3.1) (i.e., no distribution materials survey conducted; uncertified operator; no cross connection control program) <i>Class 1</i>2. No or inadequate emergency SOP (WQ.1.5.A) <i>Class 3</i>

Appendix F: Top Three Findings in Each Fiscal Year by Topic for the Active Army (FY 1994–2000)

FY 94 through FY97

Topic	Finding FY94	Finding FY95	Finding FY96	Finding FY97
Air Emissions Mgt.	<ol style="list-style-type: none"> 1. Noncompliance with state and local regulations. (AE.3.1) (i.e., inadequate emissions inventory; unpermitted sources; expired permits) 2. No or inadequate Title V permit/air emissions inventory. (AE.1.2) 3. Noncompliance with other Federal regulations 	<ol style="list-style-type: none"> 1. Noncompliance with state and local regulations. (AE.3.1) (i.e., unpermitted sources; cold cleaner lids left open; open burning; inadequate record-keeping; fugitive emissions; inadequate emissions inventory; inadequate controls on gasoline pumps; uncertified 	<ol style="list-style-type: none"> 1. Noncompliance with state and local regulations. (AE.3.1) (i.e., cold cleaner lid left open; unpermitted sources; noncompliance with permit requirements; inadequate training; improper incinerator operation; open burning; inadequate record-keeping) 2. Failure to apply for Title V permits. (AE.1.2) 	<ol style="list-style-type: none"> 1. Noncompliance with state or local regulations. (AE.3.1) (i.e., cold cleaner lid left open; improper incinerator operation; fugitive emissions; unpermitted sources; inadequate 2. Failure to apply for Title V permits. (AE.1.2)

Topic	Finding FY94	Finding FY95	Finding FY96	Finding FY97
		<p>incinerator operator; improper incinerator operation; noncompliance with permit requirements)</p> <p>2. No or inadequate signs on fuel pumps. (AE.55.2)</p> <p>3. Inadequate management and organization of paperwork. (AE.1.2.A)</p>	<p>2. Inadequate management and organization of paperwork. (AE.1.2.A)</p> <p>3. No or inadequate signs on fuel pumps. (AE.55.2)</p> <p>3. Inadequate management and organization of paperwork. (AE.1.2.A)</p>	<p>2. Noncompliance or incomplete quarterly CFC procurement report. (AE.85.1.A)</p> <p>3. No certification for recycling and recovery equipment. (AE.90.2)</p> <p>3. No certification for refrigerant recovery equipment used for MVACs. (AE.90.6)</p>
Cultural Resources Mgt.	<p>1. No or inadequate ICRMP. (CR.5.1.A)</p> <p>2. Inappropriate management of historic properties affected by undertakings. (CR.5.3)</p> <p>3. No or inadequate his-</p>	<p>1. No or inadequate historic properties survey/National Register. (CR.5.1)</p> <p>2. No consultation with the SHPO during cultural resources planning. (CR.5.3)</p>	<p>1. No or inadequate historic properties survey/National Register. (CR.5.1)</p> <p>2. No or inadequate ICRMP. (CR.5.1.A)</p> <p>3. Inadequate management and organiza-</p>	<p>1. Inadequate management and organization of paperwork. (CR.1.2.A)</p> <p>2. No or inadequate historic properties survey/National Register. (CR.5.1)</p>

Topic	Finding FY94	Finding FY95	Finding FY96	Finding FY97
historic properties survey/National register. (CR.5.1)	3. No or inadequate ICRMP. (CR.5.1.A)	3. Noncompliance with other Federal regulations. (HM.2.1)	1. Noncompliance with other Federal regulations. (HM.2.1)	3. Inadequate management of historic properties affected by undertakings. (CR.5.3)
Hazardous Materials Mgt.	1. Inadequate fire protection for flammable/combustible storage areas. (HM.35.9)	2. Noncompliance with other Federal regulations. (HM.2.1)	3. Lack of or inadequate MSDSs. (HM.1.2)	1. Noncompliance with other Federal regulations. (HM.2.1) 2. Improper storage of compressed gas cylinders. (HM.45.1) 3. Containers of hazardous materials are not correctly labeled, tagged or marked. (HM.1.3)
Hazardous Waste Mgt.	1. Inadequate or lack of characterization of wastes. (HW.10.1)	2. SAP/accumulation point limits exceeded. (HW.75.1)	3. Noncompliance with	1. Noncompliance with other Federal regulations. (HM.2.1) 2. Containers of hazardous materials are not correctly labeled, tagged or marked. (HM.1.3) 3. Improper storage of compressed gas cylinders. (HM.45.1)
				1. Inadequate or lack of characterization of wastes. (HW.10.1) 2. Noncompliance with state and local regulations. (HW.3.1) 3. (i.e., inadequate
				1. Inadequate waste determination. (HW.10.1) 2. SAP/accumulation point limits exceeded. (HW.75.1) 3. 90-day limit exceeded

Topic	Finding FY94	Finding FY95	Finding FY96	Finding FY97
	state and local regulations. (HW.3.1) (i.e., inadequate secondary containment; inadequate labeling; unregistered accumulation areas; incomplete manifests; inadequate training)	state and local regulations. (HW.3.1) (i.e., improper labeling; uncharacterized waste; improper management of hazardous waste; unregistered accumulation areas; incomplete manifests; inadequate inspections)	management of 90-day storage site; uncharacterized waste; improper management of hazardous waste containers; incomplete manifests)	3. 90-day limit exceeded on storage of hazardous waste. (HW.55.1)
Natural Resources Mgt.	1. Land management operations not performed consistent with modern conservation and land use principles. (NR.10.7.A)	1. Lack or inadequate INRMP. (NR.1.3.A)	1. Lack of or inadequate INRMP. (NR.1.3.A)	1. No or inadequate INRMP. (NR.1.3.A)
	2. Lack of or inadequate INRMP. (NR.1.3.A)	2. No or inadequate survey of endangered and threatened species. (NR.20.1)	2. Current status of ongoing agreements or enforcement actions not examined.	2. Noncompliance with state and local regulations. (NR.3.1) (i.e., inadequate erosion control; state listed endangered species)
	3. Insufficient vegetative cover to control dust and erosion damage. (NR.10.9.A)	3. (NR.1.5.A)	3. (NR.1.1)	3. No or inadequate survey of endangered and threatened species. (NR.20.1)
			3. Floodplains and wetlands are not identi-	3. No or inadequate survey of endangered and threatened species. (NR.20.1)

Topic	Finding FY94	Finding FY95	Finding FY96	Finding FY97
Other Environmental Issues: NEPA	<p>1. Categorical exclusions. (O1.5.3.A)</p> <p>2. NEPA not integrated into planning. (O1.5.1)</p> <p>2. EAs not reviewed as action continues. (O1.5.7.A)</p>	<p>1. No or inadequate preparation of an EA. (O1.5.4.A)</p> <p>2. No or inadequate integration of environmental review with planning and decision-making. (O1.5.2.A)</p> <p>3. NEPA not integrated into planning. (O1.5.1)</p> <p>3. Categorical exclusions (O1.5.3.A)</p>	<p>1. NEPA not integrated into planning. (O1.5.1)</p> <p>2. Inadequate management and organization of paperwork. (O1.1.2.A)</p> <p>3. No or inadequate preparation of an EA. (O1.5.4.A)</p>	<p>1. Inadequate management and organization of paperwork. (O1.1.2.A)</p> <p>1. EA not produced when needed. (O1.5.2)</p> <p>2. Inadequate or lack of implementation of NEPA. (O1.1.3.A)</p> <p>3. No or incomplete preparation of an EA. (O1.5.4.A)</p>
Other Env. Issues: Noise	<p>1. No or inadequate ICUZ study. (O2.1.3.A)</p> <p>2. No or inadequate ICUZ committee. (O2.1.4.A)</p>	<p>1. No or inadequate ICUZ study. (O2.1.3.A)</p> <p>2. No or inadequate ICUZ committee. (O2.1.4.A)</p>	<p>1. No or inadequate ICUZ study. (O2.1.3.A)</p> <p>2. No or inadequate ICUZ committee. (O2.1.4.A)</p>	<p>1. No or incomplete ICUZ study. (O2.1.3.A)</p> <p>2. No or inadequate assessment of the effect of noise. (O2.1.5.A)</p>

Topic	Finding FY94	Finding FY95	Finding FY96	Finding FY97
	3. No or inadequate noise complaint procedure. (O2.1.10.A)	3. No or inadequate noise compliant procedure. (O2.1.10.A)	3. No or incomplete operational data on noise-producing activities. (O2.1.9.A)	3. No or inadequate noise complaint procedure. (O2.1.10.A)
Other Env. Issues, IRP				

Topic	Finding FY94	Finding FY95	Finding FY96	Finding FY97
Other Env. Issues: P2	1. No or incomplete master listing of all hazardous substances. (O4.10.1.A)	1. Pollution prevention plan inadequate or incomplete. (O4.5.1)	1. Pollution prevention plan inadequate or incomplete. (O4.5.1)	1. Pollution prevention plan inadequate or incomplete. (O4.5.1)
	2. Hazardous materials management is not considered an integral part of hazardous waste minimization. (O4.10.2.A)	2. Hazardous materials management is not considered an integral part of hazardous waste minimization. (O4.10.2.A)	2. Hazardous materials management is not considered an integral part of hazardous waste minimization. (O4.10.2.A)	2. Hazardous materials management is not considered an integral part of hazardous waste minimization. (O4.10.2.A)
	3. Procured products not made from recovered solid waste. (O4.1.5.A)	3. Noncompliance with other Federal regulations. (O4.2.1)	3. No or inadequate use of life cycle cost analysis in evaluating new technologies. (O4.10.5.A)	3. Inadequate consideration of P2 initiatives. (O4.5.2)
Other Env. Issues: Program Mgt.	1. Inadequate management and organization of paperwork. (O5.1.2.A)	1. Inadequate management and organization of paperwork. (O5.1.2.A)	1. Inadequate management and organization of paperwork. (O5.1.2.A)	1. Inadequate management and organization of paperwork. (O5.1.2.A)
	2. No or inadequate EQCC. (O5.1.6.A)	2. Insufficient funding and staffing. (O5.6.1.A)	2. Insufficient funding and staffing. (O5.6.1.A)	2. Inappropriate management of environmental funding. (O5.6.1.A)
	3. Insufficient funding and staffing. (O5.1.3.A)	3. No or inadequate en-	3. No or inadequate en-	3. No or inadequate en-

Topic	Finding FY94	Finding FY95	Finding FY96	Finding FY97
	(O5.6.1.A)	EQCC. (O5.1.6.A)	environmental support to satellite facilities. (O5.1.13.A)	3. Insufficient funding and staffing. (O5.6.1.A)
Pesticides Mgt.	1. No comprehensive IPMP. (PM.1.4.A)	1. Not meeting pesticide storage facility requirements. (PM.45.4.A)	1. No comprehensive IPMP. (PM.1.4.A)	1. No comprehensive IPMP. (PM.1.4.A)
	2. Pesticide storage/missing facilities not included in SPCC. (PM.45.1.A)	1. No or inadequate pesticide spill cleanup kits. (PM.45.8.A)	2. No or inadequate pest management coordinator. (PM.1.3.A)	2. Inadequate pesticide storage facility. (PM.45.4.A)
	3. No or inadequate pest management coordinator. (PM.1.3.A)	1. Inadequate outdoor pesticide mixing site/facility. (PM.45.14.A)	3. Noncompliance with pesticide storage requirements. (PM.45.1)	3. Inadequate pesticide storage/mixing sites. (PM.45.3.A)
POL Mgt.	1. Discharge of oil into or upon navigable waters. (PO.15.1)	1. Lack of or inadequate spill containment and cleanup materials. (PO.20.1)	1. Lack of or inadequate spill containment and cleanup materials. (PO.20.1)	1. No or inadequate spill containment and cleanup materials. (PO.20.1)

Topic	Finding FY94	Finding FY95	Finding FY96	Finding FY97

Topic	Finding FY94	Finding FY95	Finding FY96	Finding FY97
<p>3. Inadequate segregation of recyclable materials from solid waste. (SO.10.1)</p>	<p>inadequate methane monitoring; waste tire storage; asbestos disposal in landfill; open dumping)</p> <p>2. Nonparticipation in state/local recycling programs. (SO.25.1.A)</p> <p>3. Nonparticipation in state/local recycling programs. (SO.25.1.A)</p>	<p>improper disposal of regulated medical waste; waste tire storage; inadequate closure plan)</p> <p>2. Inadequate segregation of recyclable materials from solid waste. (SO.10.1)</p> <p>3. Nonparticipation in state/local recycling programs. (SO.25.1.A)</p>	<p>improper disposal of regulated medical waste; waste tire storage; inadequate closure plan)</p> <p>2. Inadequate segregation of recyclable materials from solid waste. (SO.10.1)</p> <p>3. Inadequate solid waste storage. (SO.10.1.A)</p>	<p>inadequate disposal in state/local recycling programs. (SO.25.1.A)</p>
<p>Storage Tanks Mgt.</p>	<p>1. Missing "USED OIL" label on ASTs. (ST.125.1)</p> <p>2. Inadequate spill overfill protection for substandard USTs. (ST.30.1A)</p> <p>3. Inadequate UST closure. (ST.95.3)</p>	<p>1. Noncompliance with state and local regulations. (ST.3.1) (i.e., unregistered storage tanks; inadequate recordkeeping; inadequate secondary containment; inadequate monitoring; inadequate USTs)</p>	<p>1. Noncompliance with state and local regulations. (ST.3.1) (i.e., unregistered storage tanks; inadequate secondary containment; inadequate spill/overflow detection)</p>	<p>1. Inadequate UST lease detection systems. (ST.65.1)</p> <p>2. Noncompliance with state and local regulations. (ST.3.1) (i.e., inadequate UST labeling; inadequate spill/overflow protection; inadequate UST</p>

Topic	Finding FY94	Finding FY95	Finding FY96	Finding FY97
		2. No or inadequate secondary containment for bulk storage tanks. (ST.5.1)	3. Substandard USTs not upgraded, closed, or removed.	3. Inadequate management and organization of paperwork. (ST.1.2.A)
Toxic Substances, PCB		1. No or inadequate annual PCB document log. (T1.15.1)	1. No or inadequate annual PCB document log. (T1.15.1)	1. No or inadequate annual PCB document log. (T1.15.1)
		2. No ML markings for PCB equipment. (T1.10.2)	2. No ML markings for PCB equipment.	1. No or inadequate annual PCB document log. (T1.15.1)

Topic	Finding FY94	Finding FY95	Finding FY96	Finding FY97
Toxic Substances, Asbestos	1. No or incomplete asbestos survey. (T2.1.3.A)	1. No or inadequate Installation Asbestos Management Plan. (T2.1.4.A)	1. No or incomplete asbestos survey. (T2.1.3.A)	than or equal to 50ppm. 3. Inadequate operational procedures at PCB storage areas. (T1.40.4)
Toxic Substances, Radon	1. No or inadequate mitigation of structures. (T3.1.12.A)	1. Noncompliance with state and local regulations. (T3.3.1) (i.e., inadequate radon re-	1. Radon measurements not performed. (T3.1.3.A)	1. Incomplete radon measurements. (T3.1.3.A)

Topic	Finding FY94	Finding FY95	Finding FY96	Finding FY97	Finding FY98

Topic	Finding FY94	Finding FY95	Finding FY96	Finding FY97
Wastewater Mgt.	<p>1. Lack of or not meeting requirements of state/Federal NPDES for point source discharges. (WA.10.1)</p> <p>2. Noncompliance with state and local regulations. (WA.3.1) (i.e., unpermitted discharge; inadequate secondary containment; noncompliance with permit requirements; no backup power at WWTP; un-certified operators)</p> <p>3. Introduction of pollutants into POTW/FOTW. (WA.25.2)</p>	<p>1. Noncompliance with state and local regulations. (WA.3.1) (i.e., unpermitted discharge; inadequate secondary containment; unpermitted discharge; inadequate stormwater pollution prevention plan; improper maintenance; inadequate record-keeping of sludge removal; noncompliance with permit requirements)</p> <p>2. Discharges that would cause pass through or interference at the POTW/FOTW. (WA.25.1)</p> <p>3. Introduction of pollutants into POTW/FOTW. (WA.25.2)</p>	<p>1. Noncompliance with state and local regulations. (WA.3.1) (i.e., noncompliance with permit requirement; violation of pretreatment standard; unpermitted discharge; inadequate stormwater pollution prevention plan; improper maintenance; inadequate record-keeping of sludge removal; noncompliance with permit requirements)</p> <p>2. Discharges that would cause pass through or interference at the POTW/FOTW. (WA.25.1)</p>	<p>1. Noncompliance with state/local regulations. (WA.3.1) (i.e., noncompliance with permit requirement; violation of pretreatment standard; unpermitted discharge; inadequate stormwater pollution prevention plan; improper maintenance; inadequate record-keeping of sludge removal; noncompliance with existing state/Federal NPDES for point source discharges. (WA.10.1)</p> <p>2. Discharges that would cause pass through or interference at the POTW/FOTW. (WA.25.1)</p>

Topic	Finding FY94	Finding FY95	Finding FY96	Finding FY97
Water Quality Mgt.	1. Noncompliance with state and local regulations. (WQ.3.1) (i.e., inadequate recordkeeping; no cross connection control program; uncertified operators; wells near contamination source; noncompliance with permit requirements)	1. Noncompliance with state and local regulations. (WQ.3.1) (i.e., improper well closure; improper sampling; no cross connection control program; no disinfection of repairs; noncompliance with permit requirements)	1. Noncompliance with state and local regulations. (WQ.3.1) (i.e., no cross connection control program; inadequate monitoring/inspection; no emergency continuing plan)	1. Noncompliance with state and local regulations. (WQ.3.1) (i.e., no cross connection control program; improper well closure; no disinfection of repairs; no emergency response program; inadequate security)

FY 98 through FY00

Topic	Finding FY98	Finding FY99	Finding FY00
Air Emissions Mgt.	1. Noncompliance with state and local regulations. (AE.3.1)(i.e., fugitive emissions)	1. Lack of or noncompliance with air permits (Multiple) 2. No or inadequate management of CFCs/Halon (Multiple) 3. Noncompliance with state and local regulations. (AE.3.1)(i.e., particulates)	1. No or inadequate management of CFCs/Halon (Multiple) 2. Noncompliance with state and local regulations. (AE.3.1)(i.e., particulates)
Cultural Resources Mgt.	1. Inadequate management and organization of paperwork. (CR.1.2.A)	1. No or inadequate ICRMP (CR.1.6.A) 2. No or inadequate long-term management of collections (Multiple) 3. Inadequate management and organization of paperwork.	1. No or inadequate historic properties survey/National register. (CR.5.1) 2. No or inadequate ICRMP (CR.1.6.A) 3. Inadequate management and organization of paperwork.

Topic	Finding FY98	Finding FY99	Finding FY00
Hazardous Materials Mgt.	1. Noncompliance with Federal requirements not in checklist. (HM.2.1)	1. Noncompliance with Federal safety requirements not in checklist. (HM.2.1)	No findings (CR.1.2.A)
Hazardous Waste Mgt.	4. Failure to implement a hazardous materials management program. (HM.1.5.A)	2. No or inadequate hazard communication program. (HM.10.1)	No findings (CR.1.2.A)
	2. Training regarding hazardous chemical use in laboratories. (HM.15.2)	3. Improper storage of compressed gas cylinders. (HM.45.1)	
	2. Improper storage of compressed gas cylinders. (HM.45.1)		
	1. Inadequate or lack of characterization of wastes. (HW.10.1)	1. Inadequate storage at 90-day areas (Multiple)	1. Inadequate storage at 90-day areas (Multiple)
	2. Noncompliance with Federal requirements not in checklist.	2. Inadequate or lack of characterization of wastes. (HW.10.1)	2. Inadequate or lack of characterization of wastes. (HW.10.1)

Topic	Finding FY98	Finding FY99	Finding FY00
	3. SAP/accumulation point limits exceeded. (HW.75.1)	3. SAP/accumulation point limits exceeded. (HW.10.1)	3. SAP/accumulation point limits exceeded. (HW.75.1)
Natural Resources Mgt.	1. Inadequate management and organization of paperwork. (NR.1.2.A) 2. Lack of or inadequate INRMP. (NR.1.3.A) 3. No or inadequate Natural Resources Management Plan. (NR.1.5.A)	1. Lack of or inadequate INRMP. (NR.1.3.A) 2. No or inadequate training of law enforcement personnel (NR.4.3.A) 3. No or inadequate conservation of endangered species (NR.20.1)	1. Lack of or inadequate INRMP. (NR.1.3.A) 2. No or inadequate training of law enforcement personnel (NR.4.3.A) 3. No or inadequate conservation of endangered species (NR.20.1)
Other Environmental Issues: NEPA	1. Inadequate management and organization of paperwork. (O1.1.2.A)	N/A	N/A
Other Env. Issues: Noise	N/A	1. No or inadequate assessment of the effect of noise.	1. No or inadequate noise complaint procedure. (O2.1.10.A)

Topic	Finding FY98	Finding FY99	Finding FY00
		<p>(O2.1.5.A)</p> <p>2. No or inadequate noise complaint procedure.</p> <p>(O2.1.10.A)</p>	
Other Env. Issues: IRP	N/A	N/A	N/A
Other Env. Issues: P2	<p>1. Lack of implementation of P2 recommendations. (O4.1.9.A)</p> <p>2. Procured products not made from recovered solid waste.</p> <p>(O4.1.11.A)</p>	<p>1. No or inadequate program to implement the P2 plan</p> <p>2. No or inadequate procurement of recycle content materials</p> <p>(O4.6.1)</p>	<p>1. No or inadequate procurement of recycle content materials (O4.6.1)</p>
Other Env. Issues: Program Mgt.	1. Inadequate training for environmental personnel. (O5.7.1.A)	1. Inadequate communication (Multiple)	1. Inadequate communication (Multiple)
Pesticides Mgt.	1. Inadequate management and organization of paperwork.	1. Inadequate pesticides storage or mixing areas (Multiple)	1. Inadequate pesticides storage or mixing areas (Multiple)

Topic	Finding FY98	Finding FY99	Finding FY00
	<p>(PM.1.2.A)</p> <p>2. No comprehensive IPMP. (PM.1.4.A)</p> <p>2. Pesticide contracts not reviewed and approved. (PM.1.7.A)</p> <p>4. Pest management personnel do not meet certification requirements. (PM.5.1.A)</p> <p>2. Pesticides in leaking or deteriorating containers. (PM.45.7.A)</p>		<p>(PM.1.2.A)</p> <p>2. No comprehensive IPMP. (PM.1.4.A)</p> <p>2. Pesticide contracts not reviewed and approved. (PM.1.7.A)</p> <p>4. Pest management personnel do not meet certification requirements. (PM.5.1.A)</p> <p>2. Pesticides in leaking or deteriorating containers. (PM.45.7.A)</p> <p>1. Lack or inadequate spill containment and cleanup materials. (PO.20.1)</p> <p>2. No copy of SPCC. (PO.5.1)</p> <p>1. Lack or inadequate spill containment and cleanup materials. (PO.20.1)</p> <p>1. Inadequate storage and separations of solid waste and recyclable materials. (PO.20.1)</p> <p>1. Inadequate storage and separations of solid waste and recyclable materials. (PO.20.1)</p>
POL Mgt.			
Solid Waste Mgt.			

Topic	Finding FY98 recycling programs and procedures. (SO.25.2.A)	Finding FY99 Inadequate storage of contaminated reusable sharps. (SO.110.1)	Finding FY00 cyclables (SO.10.1) cyclables (SO.10.1)
Storage Tank Mgt.	1. Noncompliance with state and local regu- lations. (SO.3.1) (i.e., improper disposal of infectious waste)	1. Inadequate of lack of secondary containment for bulk storage tanks. (ST.5.1)	1. Inadequate of lack of secondary contain- ment for bulk stor- age tanks. (ST.5.1)
Toxic Substances, PCBs	N/A	N/A	N/A
Toxic Substances, Asbestos	1. No or incomplete as- bestos survey. (T2.1.3.A)	1. No or inadequate Installation Asbes- tos Management	N/A

Topic	Finding FY98	Finding FY99	Finding FY00
Installation Asbestos Management Plan (T2.1.4.A)	2. No or inadequate Installation Asbestos Management Plan (T2.1.4.A)	Plan. (T2.1.4.A)	
Toxic Substances, Radon	N/A	N/A	N/A
Toxic Substances, LBP	N/A	1. No or inadequate notification of housing occupants of potential LBP hazards. (T4.10.1)	1. No or inadequate notification of housing occupants of potential LBP hazards. (T4.10.1)
Wastewater Mgt.	1. Noncompliance with state and local regulations. (WA.3.1) (i.e., unpermitted discharge; WWTP inoperational) 2. Noncompliance with NPDES reporting requirements. (WA.10.2) 3. Failure to survey	1. Noncompliance with state and local regulations. (WA.3.1) (i.e., unpermitted discharge; WWTP inoperational) 2. Noncompliance with NPDES reporting requirements. (WA.10.2) 3. Failure to survey	1. Noncompliance with state and local regulations. (WA.3.1) (i.e., unpermitted discharge; WWTP inoperational)

Topic	Finding FY98	Finding FY99	Finding FY00
	stormwater discharge. (WA.10.4)		
Water Quality Mgt.	<p>1. Noncompliance with state and local regulations. (WQ.3.1) (i.e., unpermitted discharge; inadequate monitoring/inspection)</p> <p>2. Inadequate management and organization of paperwork. (WQ.1.2.A)</p> <p>3. No or inadequate maintenance of swimming pools and swimming areas. (WQ.4.3.A)</p>	<p>1. Inadequate monitoring/sampling (Multiple)</p>	<p>1. Inadequate monitoring/sampling (Multiple)</p>

Appendix G: Top Three Findings Across Fiscal Years 1991–1998 by Topic for the Army Reserve

Topic	Finding
Air Emissions Mgt.	<ol style="list-style-type: none"><li>1. Noncompliance with other Federal regulations. (AE.2.1) <i>Class 1</i><li>2. No or inadequate emissions inventory. (AE.1.3.R) <i>Class 3</i>
Cultural Resources Mgt.	<ol style="list-style-type: none"><li>1. No or inadequate historic properties survey/National Register (CR.5.1) <i>Class 1</i><li>2. No or inadequate consultation with the SHPO (CR.5.3) <i>Class 1</i><li>3. No or inadequate regulation of the excavation of archeological sites (CR.15.1) <i>Class 1</i>
Hazardous Materials Mgt.	<ol style="list-style-type: none"><li>1. Lack of or inadequate MSDSs (HM.1.2) <i>HS</i><li>2. No or inadequate coordination with the fire department (HM.1.3.R) <i>HS</i><li>3. Containers of hazardous materials are not correctly labeled, tagged or marked (HM.1.3) <i>HS</i>
Hazardous Waste Mgt.	<ol style="list-style-type: none"><li>1. No or inadequate inventory of hazardous waste (HW.1.4.R) <i>Class 3</i><li>2. Inappropriately operating as a CESQG (HW.15.1) <i>Class 1</i><li>3. No CESQG training records are maintained (HW.15.3) <i>Class 1</i>
Natural Resources Mgt.	<ol style="list-style-type: none"><li>1. Lack of or inadequate survey of endangered and

Topic	Finding
	<p>threatened species (NR.20.1) <i>Class 1</i></p> <p>2. No or inadequate ground maintenance (NR.10.1.R) <i>Class 3</i></p> <p>3. Lack of or inadequate INRMP (NR.1.3.R) <i>Class 1</i></p>
Other Environmental Issues: NEPA	<p>1. No or inadequate integration of NEPA into planning (O1.5.2.R) <i>Class 1</i></p> <p>2. No or inadequate maintenance of NEPA regulations (O1.1.1.R) <i>Class 3</i></p> <p>3. No or inadequate management and organization of paper work (O1.1.2.R) <i>Class 3</i></p>
Other Env. Issues: Noise	<p>1. No or inadequate ICUZ study (O2.1.3.R) <i>Class 3</i></p> <p>2. No or inadequate noise complaint procedure (O2.1.10.R) <i>Class 3</i></p>
Other Env. Issues: IRP	<p>1. No or inadequate screening for past use of hazardous substances (O3.1.3.R) <i>Class 3</i></p> <p>2. No or inadequate removal site evaluation (O3.1.2) <i>Class 1</i></p>
Other Env. Issues: P2	<p>1. No or incomplete master listing of all hazardous substances (O4.10.1.R) <i>Class 3</i></p> <p>2. No or inadequate Hazardous Waste Minimization Program (O4.10.2.R); Inadequate written pollution prevention plan (O4.1.4.R) <i>Class 3</i></p>
Other Env Issues: Program Mgt.	<p>1. No or incomplete file of environmental regulations (O5.1.1.R) <i>Class 3</i></p> <p>2. Inadequate training for environmental personnel (O5.7.1.R) <i>Class 3</i></p> <p>3. No or inadequate rapport between the Environmental Officer and the support MACOM environmental office (O5.8.1.R) <i>Class 3</i></p>
Pesticides Mgt.	<p>1. No or inadequate review of pesticide contracts (PM.1.7.R) <i>Class 3</i></p>

Topic	Finding
	<ol style="list-style-type: none"> 2. Noncompliance with state and local regulations (PM.3.1) (i.e., improper storage; inadequate record-keeping) <i>Class 1</i> 3. Non-DOD pesticide applicators are not certified (PM.5.1) <i>Class 1</i>
POL Mgt.	<ol style="list-style-type: none"> 1. Lack of or inadequate spill containment and cleanup materials (PO.20.1) <i>Class 1</i> 2. No copy of SPCC (PO.5.1) <i>Class 1</i> 3. No or inadequate SPCC training (PO.5.7) <i>Class 1</i>
Solid Waste Mgt.	<ol style="list-style-type: none"> 1. Nonparticipation in state/local recycling programs (SO.25.1.R) <i>Class 3</i> 2. Installation personnel not periodically informed about materials prohibited from disposal (SO.10.3.R) <i>Class 3</i> 3. Inadequate markings on food waste containers (SO.10.4.R) <i>Class 3</i>
Storage Tanks Mgt.	<ol style="list-style-type: none"> 1. Inadequate closure of USTs (ST.95.3) <i>Class 1</i> 2. Noncompliance with state and local regulations (ST.3.1) (i.e., inadequate UST closure documentation; inadequate training; inadequate secondary containment; inadequate monitoring/inspection; unregistered storage tanks) <i>Class 1</i> 3. Substandard USTs not upgraded, closed, or removed (ST.25.1) <i>Class 1</i>
Toxic Substances, PCB	<ol style="list-style-type: none"> 1. No ML markings on PCB equipment (T1.10.2) <i>Class 1</i> 2. No inspections for >500 ppm PCB transformers (T1.20.7) <i>Class 1</i> 3. No or inadequate PCB inventory (T1.10.1) <i>Class 1</i>
Toxic Substances, Asbestos	<ol style="list-style-type: none"> 1. No or incomplete asbestos survey (T2.1.3.R) <i>Class 3</i> 2. No or inadequate Installation Asbestos Management Plan (T2.1.4.R) <i>Class 3</i>

Topic	Finding
	3. No or inadequate protective equipment for asbestos personnel (T2.1.7.R) <i>Class 3</i>
Toxic Substances, Radon	1. Radon measurements not performed (T3.1.3.R) <i>Class 3</i> 2. No or inadequate measurements of Priority 1 structures (T3.1.4.R) <i>Class 3</i> 3. No or inadequate long-term measurement of Priority 2 and 3 structures (T3.1.6.R) <i>Class 3</i>
Toxic Substances, LBP	1. Noncompliance with state and local regulations (T4.3.1) (i.e., paint chips) <i>Class 1</i>
Wastewater Mgt.	1. No or inadequate surveillance of stormwater discharge (WA.10.4) <i>Class 1</i> 2. Introduction of pollutants into POTW/FOTW (WA.25.2) <i>Class 1</i> 3. Discharges that would cause pass through or interference at the POTW/FOTW (WA.25.1) <i>Class 1</i>
Water Quality Mgt.	1. Noncompliance with state and local regulations (WQ.3.1) (i.e., unpermitted discharge; inadequate secondary containment; inadequate maintenance; inadequate implementation of stormwater pollution prevention plan; no grease traps; noncompliance with permit requirements) <i>Class 1</i> 2. No or inadequate monitoring for lead and copper (WQ.50.6) <i>Class 1</i> 3. Inappropriate use of pipe, solder, or flux that contains lead (WQ.25.1) <i>Class 1</i>

Appendix H: Top Three Findings in Each Fiscal Year by Topic for the Army Reserve (FY 1991–1998)

Topic	Finding FY94	Finding FY95	Finding FY96	Finding FY97	Finding FY98
Air Emissions Mgt.	<ul style="list-style-type: none"> 1. Noncompliance with other Federal regulations. (AE.2.1) 2. No or inadequate emissions inventory. (AE.1.3.R) 3. No or incomplete quarterly CFC procurement report. (AE.85.1.R) 	<ul style="list-style-type: none"> 1. No or inadequate emissions inventory. (AE.1.3.R) 1. Noncompliance with other Federal regulations. (AE.2.1) 3. No or inadequate management of VHAP service. (AE.65.1); No or incomplete quarterly CFC procurement report. (AE.85.1A); Inadequate training for mechanics on 	<ul style="list-style-type: none"> 1. No or incomplete emissions inventory. (AE.1.3.R) 2. Noncompliance with other Federal regulations. (AE.2.1) 3. No or incomplete quarterly CFC procurement report. (AE.85.1A); Inadequate training for mechanics on 	<ul style="list-style-type: none"> 1. No or inadequate emissions inventory (AE.1.3.R) 2. Lead exposure for personnel outside specific limits (AE.4.1.R) 3. Noncompliance with state and local regulations (AE.3.1) (i.e., unpermitted sources; inadequate emissions inventory; cold cleaner lids left open) 	<ul style="list-style-type: none"> 1. Noncompliance with state and local regulations (AE.3.1) (i.e., unpermitted sources; inadequate emissions inventory; cold cleaner lids left open) 2. Noncompliance with other Federal regulations regarding air emissions (AE.2.1) 3. No or inadequate keeping of receipts and log at per-

Topic	Finding FY94	Finding FY95	Finding FY96	Finding FY97	Finding FY98
		freon recovery. (AE.90.1) No or inadequate documentation of servicing and amounts of refrigerant added to appliances. (AE.95.2)		chloroethylene dry cleaning facilities (AE.75.8); No certification for refrigerant recovery equipment used for MVACs (AE.90.6)	
Cultural Resources Mgt.	1. No or inadequate historic properties survey/National Register. (CR.5.1) 2. No or inadequate management of archaeological resources. (CR.15.2) 3. Effects of undertaking on historic properties/National Register not taken into account. (CR.5.2); SHPO not consulted during cultural resources	1. No or inadequate historic properties survey/National Register. (CR.5.1) 2. Inappropriate management of historic properties affected by undertakings. (CR.5.3)	1. No or inadequate regulation of the excavation of archaeological sites. (CR.15.1) 2. No or inadequate ICRMP. (CR.5.1.R); Inappropriate management of historic properties affected by undertakings. (CR.5.3)	1. Noncompliance with state and local regulations (CR.3.1) (i.e., no cultural resources study) 2. No or inadequate ICRMP (CR.5.1.R) 3. Inappropriate management of historic properties affected by undertakings (CR.5.3)	1. Inadequate management and organization of paperwork (CR.1.2.R) 2. Effects of undertaking on historic properties/ National Register not taken into account (CR.5.2) 2. No or inadequate management of archaeological resources (CR.15.2)

Topic	Finding FY94	Finding FY95	Finding FY96	Finding FY97	Finding FY98
Hazardous Materials Mgt.	planning. (CR.5.3)				

Topic	Finding FY94	Finding FY95	Finding FY96	Finding FY97	Finding FY98
		(HM.10.2); No or inadequate materials for spill cleanup. (HM.20.1); Inadequate flammable/combustible storage cabinets. (HM.35.5); Inadequate fire protection for flammable/combustible storage areas. (HM.35.9); Improper storage of compressed gas cylinders. (HM.45.1)			
Hazardous Waste Mgt.	1. No or inadequate written hazardous waste management plan. (HW.1.3.R) 2. No or inadequate inventory of hazardous waste. (HW.1.4.R) 3. Inadequate training	1. No or inadequate inventory of hazardous waste. (HW.1.4.R); No or inadequate secondary containment in hazardous waste storage areas. (HW.10.2); Inap-	1. No or inadequate inventory of hazardous waste. (HW.1.4.R) 2. No or inadequate training records. (HW.15.3)	1. No or inadequate inventory of hazardous waste. (HW.1.4.R) 2. No or inadequate written hazardous waste management plan (HW.1.3.R) 3. Inadequate written hazardous	1. Inadequate or lack of characterization of wastes (HW.10.1) 2. 90 day limit exceeded on storage of haz waste (HW.55.1) 3. Inadequate management and

Topic	Finding FY94	Finding FY95	Finding FY96	Finding FY97	Finding FY98
of TSDF personnel (HW.110.1); Inadequate training of CESQG personnel. (HW.15.2)	properly operating as a CESQG. (HW.15.1); Inadequate training of CESQG personnel. (HW.15.2)	waste management plan. (HW.1.3.R); No or inadequate training. (HW.15.2)	waste management plan. (HW.1.3.R); No or inadequate training. (HW.15.2)	agreement and organization of paperwork (HW.1.2.R); No or inadequate written hazardous waste management plan (HW.1.3.R); Non-compliance with other Federal regulations regarding hazardous waste (HW.2.1); Noncompliance with state and local regulations (HW.3.1) (i.e., inadequate labeling); No or inadequate hazardous waste training (HW.60.1); No or inadequate training records for facility staff who manage hazardous waste (HW.60.2); Hazard-	organization of paperwork (HW.1.2.R); No or inadequate written hazardous waste management plan (HW.1.3.R); Non-compliance with other Federal regulations regarding hazardous waste (HW.2.1); Noncompliance with state and local regulations (HW.3.1) (i.e., inadequate labeling); No or inadequate hazardous waste training (HW.60.1); No or inadequate training records for facility staff who manage hazardous waste (HW.60.2); Hazard-

Topic	Finding FY94	Finding FY95	Finding FY96	Finding FY97	Finding FY98
Natural Resources Mgt.	<p>1. No or inadequate survey of endangered and threatened species. (NR.20.1)</p> <p>2. Lack of or inadequate INRMP. (NR.1.3.R)</p> <p>2. No or inadequate maintenance of grounds. (NR.10.1.R)</p> <p>2. No or inadequate maintenance of grounds. (NR.10.1.R)</p>	<p>1. No or inadequate survey of endangered and threatened species. (NR.20.1)</p> <p>2. No or inadequate maintenance of grounds. (NR.10.1.R)</p> <p>2. No or inadequate maintenance of grounds. (NR.10.1.R)</p>	<p>1. Noncompliance with other Federal regulations. (NR.2.1)</p> <p>2. No or inadequate maintenance of grounds. (NR.10.1.R)</p>	<p>1. Noncompliance with other Federal regulations. (NR.1.1.R); No or inadequate maintenance of grounds (NR.10.1.R); No or inadequate survey of endangered and threatened species (NR.20.1)</p> <p>2. Land management operations not performed consistent with modern conservation and land use principles. (NR.10.7.R)</p>	<p>ous waste satellite accumulation point/accumulation point limits exceeded (HW.75.1)</p> <p>1. No or incomplete file of natural resources regulations (NR.1.1.R); No or inadequate maintenance under DOD control is contracted (NR.1.8.R); Natural resources are not or are inadequately managed to support the military mission while also protecting and enhancing resources for multiple use, sustainable yield, and biological integrity (NR.1.9.R); Coop-</p>

Topic	Finding FY94	Finding FY95	Finding FY96	Finding FY97	Finding FY98
Other Environmental Issues: NEPA	1. NEPA not integrated into planning. (O1.5.1) 2. Environmental review not integrated into planning and decision-making.	N/A	1. Environmental review not integrated into planning and decisionmaking. (O1.5.2.R) 2. No or inadequate copies of regulations	1. Environmental review not integrated into planning and decisionmaking. (O1.5.2.R) 2. No or inadequate copies of regulations	1. Inadequate management and organization of paperwork (O1.1.2.R) 2. Environmental review not integrated concurrently with other planning and decision-making actions (O1.5.2.R)

Topic	Finding FY94	Finding FY95	Finding FY96	Finding FY97	Finding FY98
	3. Categorical exclusions. (O1.5.3.R)		<p>tions. (O1.1.1.R); Inadequate management and organization of paperwork.</p> <p>(O1.1.2.R); NEPA implementation activities not executed. (O1.1.3.R); Noncompliance with other Federal regulations.</p> <p>(O1.2.1); EA not produced when required. (O1.5.2)</p>		<p>1. Noncompliance with state and local regulations. (O2.1.3.R)</p> <p>2. No or inadequate noise complaint procedure. (O2.1.10.R)</p> <p>3. No or inadequate assessment of the</p> <p>1. No or inadequate ICUZ study. (O2.1.3.R)</p> <p>2. No or inadequate noise complaint procedure. (O2.1.10.R)</p> <p>3. Inadequate assessment of helicopter</p> <p>1. No or incomplete ICUZ study (O2.1.3.R)</p> <p>2. No or inadequate noise complaint procedure (O2.1.10.R)</p> <p>3. No or incomplete copies of environ-</p>
Other Env. Issues: Noise					

Topic	Finding FY94	Finding FY95	Finding FY96	Finding FY97	Finding FY98
	effect of noise. (O2.1.5.R)		noise. No or inadequate operational data maintained. (O2.1.6.R); (O2.1.9.R); Non-compliance with state and local regulations. (O2.3.1) (i.e., inadequate ICUZ statement)		
Other Env. Issues: IRP	1. No or inadequate screening for past use of hazardous substances. (O3.1.3.R)	N/A	1. No or inadequate screening for past use of hazardous substances (O3.1.3.R) 2. Inadequate removal site evaluation. (O3.1.2)	1. When there is a hazardous substance contaminant site, which might require CERCLA response actions, a removal site evaluation is required to be done. (O3.1.2) 2. No or inadequate	1. No or inadequate IRP Management Plan and an IRP Guidance and Procedure Manual (O3.1.6.R) 2. Inadequate management and organization of paperwork (O3.1.2.R)

Topic	Finding FY94	Finding FY95	Finding FY96	Finding FY97	Finding FY98
Other Env. Issues: P2				screening for past use of hazardous substances (O3.1.3.R); (O3.1.5.R)	
	1. No or incomplete master listing of all hazardous substances. (O4.10.1.R)	1. No or inadequate written pollution plan. (O4.1.4.R)	1. No or inadequate training in pollution prevention. (O4.1.3.R)	1. No or inadequate written pollution plan (O4.1.4.R)	1. Inadequate management and organization of paperwork (O4.1.2.R); No or inadequate written pollution plan (O4.1.4.R)
	2. No or inadequate Hazardous Waste Minimization Program. (O4.10.2.R)	2. No or incomplete master listing of all hazardous substances.	2. Noncompliance with state and local regulations (O4.3.1) (i.e., inadequate maintenance; inadequate erosion control); Pollution prevention plan inadequate or incomplete (O4.5.1)		
	3. Noncompliance with other Federal regulations. (O4.2.1); No or inadequate hazardous waste minimization program. (O4.10.2)				
Other Env. Issues:	1. No or incomplete file of environmental	N/A	1. Inadequate management and or-	1. Inadequate training for environmental	1. No or incomplete file of envi-

Topic	Finding FY94	Finding FY95	Finding FY96	Finding FY97	Finding FY98	Finding FY99
Program Mgt.	<p>mental regulations (O5.1.1.R)</p> <p>2. Inadequate training for environmental personnel. (O5.7.1.R)</p> <p>3. No or inadequate rapport between the Environmental Officer and the support MACOM environmental office. (O5.8.1.R)</p>	<p>ganization of paperwork. (O5.1.2.R)</p> <p>2. Inadequate coordination between ARCOMS and support installations. (O5.4.1.R)</p> <p>3. Inadequate training for environmental personnel. (O5.7.1.R)</p>	<p>ganization of personnel (O5.7.1.R)</p> <p>2. Inadequate coordination between ARCOMS and support installations (O5.4.1.R)</p> <p>3. No or incomplete file of environmental regulations (O5.1.1.R)</p>	<p>2. Inadequate coordination between ARCOMS and support installations (O5.1.2.R); No or inadequate EQCC (O5.1.6.R); No or inadequate Inter/Intraservice Support Agreements (O5.1.14.R); No or inadequate communication of top management's commitment to environmental protection (O5.2.1.R); No or inadequate procedure for environmental incident investigation and reporting (O5.2.3.R); Insufficient funding and</p>		

Topic	Finding FY94	Finding FY95	Finding FY96	Finding FY97	Finding FY98
Pesticides Mgt.	1. Pesticide applicators are not certified. (PM.5.1)	1. No or inadequate review of pesticide contracts. (PM.1.7.R)	1. No or inadequate review of pesticide contracts. (PM.1.7.R)	1. No or inadequate management of pesticide registration (PM.1.2); Installation does not meet measures of merit (PM.1.11.R); (PM.45.10.R)	1. Noncompliance with state and local regulations (PM.3.1) (i.e., inadequate labeling, no notification of service contracts; improper storage)
	2. No or inadequate management of pesticide registration. (PM.1.2)	2. Noncompliance with state and local regulations. (PM.3.1) (i.e., visible spill); Application of restricted use pesticides by	3. No or inadequate review of pesticide contracts. (PM.1.7.R)		2. No or inadequate review of pesticide contracts

Topic	Finding FY94	Finding FY95	Finding FY96	Finding FY97	Finding FY98
			<p>non-certified facility personnel. (PM.5.1)</p> <p>3. Application of restricted use pesticides by non-certified facility personnel. (PM.5.1.R)</p>	<p>(PM.1.7.R)</p> <p>3. No or incomplete file of pesticide regulations (PM.1.1.R); No Pest Management Coordinator (PM.1.3.R); No or inadequate Installation Pest Management Plan (PM.1.4.R); Installation does not meet measures of merit (PM.1.11.R); Application of restricted use pesticides by noncertified facility personnel (PM.5.1.R); Pesticide storage/missing facilities not included in SPCC (PM.45.1.R); Inadequate pesticide storage facility</p>	

Topic	Finding FY94	Finding FY95	Finding FY96	Finding FY97	Finding FY98
				<p>(PM.45.4.R); Mobile equipment is not thoroughly decontaminated and is not labeled "CONTAMINATED WITH PESTICIDES"</p> <p>(PM.45.5.R); No or inadequate security fencing</p> <p>(PM.45.21.R); No or inadequate signs at pesticide management facility</p> <p>(PM.45.26.R); No or separate ventilation system</p> <p>(PM.45.29.R)</p>	
POL Mgt.	<ol style="list-style-type: none"> 1. No copy of SPCC. (PO.5.1) 2. No or inadequate SPCC training. (PO.5.7) 	<ol style="list-style-type: none"> 1. Noncompliance with state and local regulations. (PO.3.1) 	<ol style="list-style-type: none"> 1. Lack of or inadequate spill containment and cleanup materials. (PO.20.1) 	<ol style="list-style-type: none"> 1. No or inadequate SPCC training (PO.5.7); No or inadequate spill containment and 	<ol style="list-style-type: none"> 1. Noncompliance with state and local regulations (PO.3.1) (i.e., inadequate secondary contain-

Topic	Finding FY94	Finding FY95	Finding FY96	Finding FY97	Finding FY98
	3. No or inadequate plan for reclaimed, recoverable, and waste liquid petroleum products. (PO.60.1.R)	quate review of the SPCC. (PO.5.2.R); No or inadequate SPCC training. (PO.5.7); Insufficient management of used oil transporters. (PO.65.3); Missing "USED OIL" label on containers other than tanks. (PO.65.6)	2. Inadequate ISCP training. (PO.5.6.R)	2. Inadequate ISCP training. (PO.20.1)	1. Noncompliance (PO.20.1)
Solid Waste Mgt.	1. Nonparticipation in state/local recycling programs. (SO.25.1.R)	1. Nonparticipation in state/local recycling programs. (SO.25.1.R)	1. Nonparticipation in state/local recycling programs. (SO.25.1.R)	2. Installation per-	2. SPCC plan not certified by a professional engineer (PO.5.5); No copy of SPCC available (PO.5.6); No facility response plan submitted to the regional administrator (PO.10.1); No or inadequate spill containment and cleanup materials (PO.20.1); No "USED OIL" label on containers other than tanks (PO.65.6)

Topic	Finding FY94	Finding FY95	Finding FY96	Finding FY97	Finding FY98	Finding FY99
	sonnel are not periodically informed about prohibited materials. (SO.10.3.R)	sonnel not periodically informed about materials prohibited from disposal. (SO.10.3.R)	sonnel not periodically informed about materials prohibited from disposal. (SO.10.3.R)	3. Inadequate solid waste storage (SO.10.1.R); No or inadequate markings on food waste containers. (SO.10.4.R)	state/local recycling programs (SO.25.1) 3. Inadequate solid waste storage (SO.10.1.R); No or inadequate markings on food waste containers. (SO.10.4.R)	pliance with state and local regulations (SO.3.1) (i.e., overflowing dumpster; improper management of regulated medical waste)
Storage Tanks	1. Inadequate UST closure. (ST.95.3); Noncompliance with state and local	N/A	1. Inadequate spill/overfill protection for standard USTs.	1. No or inadequate UST removal (ST.95.1.R) 2. No or inadequate	1. Noncompliance with state and local regulations (ST.3.1) (i.e., inadequate	

Topic	Finding FY94	Finding FY95	Finding FY96	Finding FY97	Finding FY98
Regulations	regulations. (ST.3.1) (i.e., unregistered storage tanks; inadequate secondary containment)	2. Inadequate UST closure. (ST.95.3) 3. No or inadequate UST removal. (ST.95.1.R)	(ST.30.1.R) 2. Inadequate UST closure. (ST.95.3) 3. No or inadequate UST removal. (ST.95.1.R)	recordkeeping regarding USTs (ST.90.2) 3. Substandard USTs not upgraded, closed, or removed (ST.25.1)	training; inadequate secondary containment; inadequate leak detection) 2. No or inadequate secondary containment for bulk storage tanks (ST.5.1)
Toxic Substances, PCB	2. Substandard USTs not upgraded, closed, or removed. (ST.25.1); Inadequate AST for used oil. (ST.125.1)				

Topic	Finding FY94	Finding FY95	Finding FY96	Finding FY97	Finding FY98
Toxic Substances, Asbestos	<p>1. No or inadequate asbestos survey. (T2.1.3.R)</p> <p>2. No or inadequate Installation Asbestos Management Plan. (T2.1.4.R)</p> <p>3. No or inadequate protective equipment for asbestos personnel. (T2.1.7.R)</p>	<p>1. No or incomplete asbestos survey. (T2.1.3.R)</p> <p>2. No or inadequate Installation Asbestos Management Plan. (T2.1.4.R)</p> <p>3. No or inadequate protective equipment for asbestos personnel. (T2.1.7.R)</p>	<p>1. No or incomplete asbestos survey. (T2.1.3.R)</p> <p>2. No or incomplete asbestos survey (T2.1.4.R)</p> <p>3. No or inadequate protective equipment for asbestos personnel. (T2.1.7.R)</p>	<p>1. No or incomplete Installation Asbestos Management Plan (T2.1.4.R)</p> <p>2. No or incomplete asbestos survey (T2.1.3.R)</p> <p>3. Asbestos actions with the potential to generate fugitive emissions not environmentally assessed (T2.1.5.R)</p>	<p>1. No or incomplete Installation Asbestos Management Plan (T2.1.4.R)</p> <p>2. No or incomplete asbestos survey (T2.1.3.R); Noncompliance with notification requirements for facilities that demolish structures (T2.5.1)</p>
Toxic Substances, Radon	<p>1. Incomplete radon measurements. (T3.1.3.R)</p> <p>2. No or inadequate measurement of Priority 1 structures. (T3.1.4.R)</p>	N/A	<p>1. Radon measurements not performed. (T2.1.3.R)</p> <p>2. No or inadequate mitigation of structures. (T2.1.12.R)</p> <p>3. No or inadequate</p>	<p>1. Incomplete radon measurements (T3.1.3.R)</p> <p>2. No or inadequate written radon policy (T3.1.14.R); No or inadequate data-</p>	<p>1. Radon measurements not being done according to schedule (T3.1.3.R); No or inadequate annual reports are being submitted</p>

Topic	Finding FY94	Finding FY95	Finding FY96	Finding FY97	Finding FY98	Finding FY99
	3. No or inadequate preparation and submission of annual reports. (T3.1.15.R)		long-term measurement of Priority 2 and 3 structures. (T3.1.6.R)	base (T3.1.16.R)	(T3.1.15.R); Non-compliance with other Federal regulations regarding radon (T3.2.1)	
Toxic Substances, LBP	1. Noncompliance with state and local regulations. (T4.3.1) (i.e., paint chipped)	N/A	N/A	1. Noncompliance with state and local regulations (T4.3.1)	1. Noncompliance with other Federal regulations regarding LBP (T4.2.1)	
Wastewater	1. No or inadequate surveillance of stormwater discharge. (WA.10.4) 2. No or inadequate system for investigating water pollution complaints (WA.1.3.R) 3. Introduction of pollutants into POTW/FOTW. (WA.25.2)	1. Inadequate management and organization of paperwork. (WA.1.2.R); No or inadequate system for investigating water pollution complaints. (WA.1.3.R); Noncompliance with state and local regulations. (WA.3.1); No or inadequate surveillance of stormwa-	1. No or inadequate surveillance of stormwater discharge. (WA.10.4) 2. Introduction of pollutants into POTW/FOTW. (WA.25.2) 3. No or inadequate system for investigating water pollution complaints (WA.1.3.R); Discharges that would cause pass through or interfere-	1. No or inadequate surveillance of stormwater discharge (WA.10.4) 2. Discharges that would cause pass through or interfere-	1. Noncompliance with state and local regulations (WA.3.1) (i.e., unpermitted discharge; inadequate recordkeeping) 2. Inadequate analytical and sampling methods (WA.10.5); Discharges that would cause pass through or interfere-	1. Noncompliance with state and local regulations (WA.1.3.R); Discharges that would cause pass through or interfere-

Topic	Finding FY94	Finding FY95	Finding FY96	Finding FY97	Finding FY98	Finding FY99
		ter discharge. (WA.10.4); Dis- charges that would cause pass through or interference at the POTW/FOTW. (WA.25.1)	charges that would cause pass through or interference at the POTW/FOTW. (WA.25.1)	(WA.3.1) (i.e., im- proper filling of wetland; oil/water separator malfunc- tion); Introduc- tion of pollutants into POTW/FOTW (WA.25.2)	(WA.3.1) (i.e., im- proper filling of wetland; oil/water separator malfunc- tion); Introduc- tion of pollutants into POTW/FOTW (WA.25.2)	ence at the POTW/FOTW (WA.25.1); Intro- duction of pollut- ants into POTW/FOTW (WA.25.2)
Water Quality	1. Noncompliance with state and local regulations. (WQ.3.1) (i.e., no backflow preven- tion; inadequate sampling) 2. No or inadequate monitoring of lead and copper. (WQ.50.6); No or inadequate moni- toring of lead and copper. (WQ.78.6)	N/A	1. Noncompliance with state and local regulations. (WQ.3.1) (i.e., no cross connection control program; violation of local plumbing code) 2. Lead used in pipe, solder, or flux. (WQ.25.1)	1. Inadequate man- agement and or- ganization of pa- perwork (WQ.1.2.R); No or inadequate surveil- lance of public wa- ter systems 1. Lead used in pipe, solder, or flux. (WQ.25.1)	1. Noncompliance with state and local regulations (WQ.3.1) (i.e., no cross connection control program; inadequate record- keeping; uncertified operator; inade- quate monitoring) 2. No or inadequate records of actions taken to correct or repair the distribu- tion system (WQ.1.3.R); Non- compliance with records of actions	1. Noncompliance with state and local regulations (WQ.3.1) (i.e., no cross connection control program; inadequate record- keeping; uncertified operator; inade- quate monitoring) 2. No or inadequate records of actions taken to correct or repair the distribu- tion system (WQ.1.3.R); Non- compliance with records of actions

Topic	Finding FY94	Finding FY95	Finding FY96	Finding FY97	Finding FY98
				state and local regulations (WQ.3.1) (i.e., no backflow prevention)	taken to correct or repair the distribution system (WQ.1.3.R); No or inadequate water supply distribution system maps (WQ.1.4.R); Non-compliance with other Federal regulations regarding water quality (WQ.2.1; No or inadequate program to reduce exposure of lead to children (WQ.25.1.R)

Topic	Finding FY91	Finding FY92	Finding FY93
Air Emissions Mgt.	1. Noncompliance with other Federal regulations regarding air emissions (AE.2.1) 2. No or incomplete quarterly CFC procurement report (AE.85.1.R); No or inadequate emissions inventory (AE.1.3.R)	1. Noncompliance with other Federal regulations regarding air emissions (AE.2.1) 2. No or incomplete quarterly CFC procurement report (AE.85.1.R) 3. No or incomplete file of air emissions regulations (AE.1.1.R); No or inadequate emissions inventory (AE.1.3.R)	1. Noncompliance with other Federal regulations regarding air emissions (AE.2.1) 2. No or inadequate emissions inventory (AE.1.3.R) 3. No or incomplete quarterly CFC procurement report (AE.85.1.R)
Cultural Resources Mgt.	N/A	1. Current status of ongoing agreements or enforcement actions not examined (CR.1.1); No or incomplete file of cultural resources regulations (CR.1.1.R); No or inadequate historic properties survey/National Register (CR.5.1)	1. No or inadequate historic properties survey/National Register (CR.5.1) 2. No or incomplete file of cultural resources regulations (CR.1.1.R) 3. Noncompliance with other Federal regulations regarding cultural resources (CR.2.1); Effects of undertaking on historic properties/National Register not taken into account (CR.5.2)

Topic	Finding FY91	Finding FY92	Finding FY93
Hazardous Materials Mgt.	1. Inadequate flammable storage cabinets (HM.35.4) 2. Noncompliance with other Federal regulations regarding hazardous materials (HM.2.1) 3. Lack of or inadequate MSDSs (HM.1.2); No or inadequate coordination with the fire department (HM.1.3.R); Inadequate flammable/combustible storage rooms inside of buildings (HM.35.6)	1. Noncompliance with other Federal regulations regarding hazardous materials (HM.2.1) 2. Lack of or inadequate MSDSs (HM.1.2) 3. Inadequate flammable storage cabinets (HM.35.4)	1. Lack of or inadequate MSDSs (HM.1.2) 2. No or inadequate storage and handling of flammable/combustible materials (HM.35.1) 3. No or inadequate coordination with the fire department (HM.1.3.R)
Hazardous Waste Mgt.			1. No or inadequate inventory of hazardous waste (HW.1.4.R) 2. No or inadequate written hazardous waste management plan (HW.1.3.R); Inadequate or lack of characterization of wastes (HW.10.1)

Topic	Finding FY91	Finding FY92	Finding FY93
Natural Resources Mgt.	(HW.1.5.R); No or inadequate report on HAZMIN efforts (HW.1.6.R); Inadequate containers for storing hazardous waste (HW.30.2)	1. Current status of ongoing agreements or enforcement actions not examined (NR.1.1); No or incomplete file of natural resources regulations (NR.1.1.R); Natural resources are not or are inadequately managed to support the military mission while also protecting and enhancing resources for multiple use, sustainable yield, and biological integrity (NR.1.9.R); Noncompliance with other Federal regulations regarding natural resources (NR.2.1)	1. No or inadequate Natural Resources Management Plan (NR.1.5.R) 2. No or inadequate ground maintenance (NR.10.1.R) 3. No or inadequate survey of endangered and threatened species (NR.20.1)

Topic	Finding FY91	Finding FY92	Finding FY93
Other Environmental Issues: NEPA	N/A	1. No or inadequate integration of NEPA into planning (O1.5.2.R); No or incomplete file of NEPA regulations (O1.1.1.R); Current status of ongoing agreements or enforcement actions not examined (O1.1.1)	1. No or inadequate integration of NEPA into planning (O1.5.2.R) 2. Categorical exclusions (O1.5.3.R) 3. No or incomplete preparation of an EA (O1.5.4.R)
Other Env. Issues: Noise	1. No or inadequate ICUZ study (O2.1.3.R)	1. No or inadequate ICUZ study (O2.1.3.R) 2. No or inadequate noise complaint procedure (O2.1.10.R)	1. No or incomplete ICUZ study (O2.1.3.R) 2. No or inadequate noise complaint procedure (O2.1.10.R) 3. No or incomplete file of noise regulations (O2.1.1.R); Noncompliance with other Federal regulations regarding noise (O2.2.1)
Other Env. Issues: IRP	N/A	1. No or inadequate screening for past use of hazardous substances (O3.1.3.R)	1. No or inadequate screening for past use of hazardous substances (O3.1.3.R) 2. No or incomplete file of IRP

Topic	Finding FY91	Finding FY92	Finding FY93
		3. Current status of ongoing agreements or enforcement actions not examined (O3.1.1)	<p>regulations (O3.1.1.R)</p> <p>3. No or inadequate preliminary assessment and remedial site investigation (O3.1.5)</p> <p>1. No or incomplete master listing of all hazardous substances (O4.10.1.R)</p> <p>2. Inadequate management and organization of paperwork (O4.1.2.R)</p> <p>3. Procured products not made from recovered solid waste (O4.1.5.R); No or inadequate Hazardous Waste Minimization Program (O4.10.2.R)</p>
Other Env. Issues: P2		<p>1. Inadequate management and organization of paperwork (O4.1.2.R)</p> <p>2. No or incomplete master listing of all hazardous substances (O4.10.1.R)</p>	<p>1. No or incomplete master listing of all hazardous substances (O4.10.1.R)</p> <p>2. Inadequate management and organization of paperwork (O4.1.2.R)</p> <p>3. The EPR-M report and</p>
Other Env. Issues: Program Mgt.		<p>1. No or incomplete file of environmental regulations (O5.1.1.R)</p> <p>2. Noncompliance with other Federal regulations regarding program mgt. (O5.2.1);</p>	<p>1. Inadequate training for environmental personnel (O5.7.1.R)</p> <p>2. No or incomplete file of environmental regulations (O5.1.1.R)</p> <p>1. No or incomplete file of environmental regulations (O5.1.1.R)</p> <p>2. Inadequate environmental training (O5.7.1.R)</p> <p>3. The EPR-M report and</p>

Topic	Finding FY91	Finding FY92	Finding FY93
Inadequate training for environmental personnel (O5.7.1.R)	3. Noncompliance with other Federal regulations regarding program mgt. (O5.2.1); No or inadequate rapport between the Environmental Officer and the support	MACOM environmental office (O5.8.1.R); The EPR-M report and EQR submission process are not incorporated into Army planning, programming, and budgeting (O5.10.4.R)	EQR submission process are not incorporated into Army planning, programming, and budgeting (O5.10.4.R)
Pesticides Mgt.	N/A	<ol style="list-style-type: none"> No or inadequate review of pesticide contracts (PM.1.7.R) Application of restricted use pesticides by non-certified non-DOD personnel (PM.5.1); Application of restricted use pesticides by non-certified facility personnel. (PM.5.1.R) 	<ol style="list-style-type: none"> Application of restricted use pesticides by non-certified non-DOD personnel (PM.5.1); Application of restricted use pesticides by non-certified facility personnel. (PM.5.1.R) No or inadequate disposal for all excess pesticides (PM.55.1.R)

Topic	Finding FY91	Finding FY92	Finding FY93
POL Mgt.	1. No or inadequate plan for reclaimed, recoverable, and waste liquid petroleum products (PO.60.1.R)	1. No or inadequate spill containment and cleanup materials (PO.20.1) 2. No copy of SPCC (PO.5.1); No or inadequate plan for reclaimed, recoverable, and waste liquid petroleum products (PO.60.1.R)	1. No copy of SPCC (PO.5.1); No or inadequate plan for reclaimed, recoverable, and waste liquid petroleum products (PO.60.1.R) 2. Inadequate ISCP training (PO.5.6.R)
Solid Waste Mgt.		1. Nonparticipation in state/local recycling programs (SO.25.1) 2. No or inadequate inspections of industrial shop waste receptacles (SO.10.2.R); Installation personnel not periodically informed about materials prohibited from disposal (SO.10.3.R); No or inadequate separation of corrugated containers (SO.25.4)	1. Nonparticipation in state/local recycling programs (SO.25.1) 2. Noncompliance with other Federal regulations regarding solid waste (SO.2.1) 3. No or inadequate inspections of industrial shop waste receptacles (SO.10.2.R)
Storage Tanks Mgt.		1. Noncompliance with state and local regulations	1. Noncompliance with state and local regulations 1. Noncompliance with state and local regulations

Topic	Finding FY91	Finding FY92	Finding FY93
1. (ST.3.1) (i.e., unregistered storage tanks)	2. No or inadequate record-keeping regarding USTs (ST.90.2)	age tanks (ST.5.1)	(ST.3.1) (i.e., no UST closure documentation; unregistered storage tanks; no registration certificate posted)
		2. No or inadequate release detection for USTs (ST.60.1); Inadequate UST closure (ST.95.3)	

Topic	Finding FY91	Finding FY92	Finding FY93
Toxic Substances, Asbestos	1. No or incomplete Installation Asbestos Management Plan (T2.1.4.R)	1. No or incomplete asbestos survey (T2.1.3.R)	1. No or incomplete asbestos survey (T2.1.3.R)
	2. No or incomplete asbestos survey (T2.1.3.R); No or inadequate protective equipment for asbestos personnel (T2.1.7.R)	2. No or incomplete Installation Asbestos Management Plan (T2.1.4.R)	2. No or incomplete Installation Asbestos Management Plan (T2.1.4.R)
		3. No or inadequate protective equipment for asbestos personnel (T2.1.7.R)	3. No or incomplete identification of the existence, extent and condition of all asbestos (T2.1.6.R)
Toxic Substances, Radon	1. Incomplete radon measurements (T3.1.3.R)	1. Incomplete radon measurements (T3.1.3.R)	1. Incomplete radon measurements (T3.1.3.R)
		2. No or inadequate database (T3.1.16.R)	2. No or inadequate long term measurement of Priority 2
		3. No or incomplete file of radon regulations (T3.1.1.R); No or inadequate preparation and submission of annual reports (T3.1.15.R)	3. No or inadequate mitigation of structures (T3.1.6.R); No or inadequate mitigation of structures (T3.1.12.R)
Toxic Substances, LBP	N/A	N/A	N/A
Wastewater Mgt.	1. No or inadequate system for investigation water pol-	1. No or inadequate surveil-	1. No or inadequate surveil-
		lance of stormwater dis-	lance of stormwater dis-

Topic	Finding FY91	Finding FY92	Finding FY93
	lution complaints (WA.1.3.R); Noncompliance with state and local regulations (WA.3.1) (i.e., inadequate maintenance); No or inadequate surveillance of stormwater discharge (WA.10.4)	2. Noncompliance with state and local regulations (WA.3.1) (i.e., inadequate implementation of stormwater pollution prevention plan; unpermitted discharges; inadequate maintenance; noncompliance with permit requirements) 3. Introduction of pollutants into POTW/FOTW (WA.25.2)	charge (WA.10.4) 2. No or inadequate system for investigation water pollution complaints (WA.1.3.R) 3. Noncompliance with state and local regulations (WA.3.1) (i.e., inadequate maintenance; unpermitted discharge; inadequate secondary containment); Introduction of pollutants into POTW/FOTW (WA.25.2)
Water Quality Mgt.	N/A	1. Noncompliance with other Federal regulations regarding water quality (WQ.2.1); No or inadequate records for public water systems (WQ.30.1)	1. Noncompliance with state and local regulations (WQ.3.1) (i.e., inadequate lead sampling; no backflow prevention; violation of MCLs) 2. No or incomplete file of water quality regulations (WQ.1.1.R); No or inadequate records of actions (WQ.30.1) 3. No or inadequate records

Topic	Finding FY91	Finding FY92	Finding FY93
		taken to correct or repair the distribution system (WQ.1.3.R)	for community water sys- tems (WQ.40.1)

Appendix I: Top Three Findings Across Fiscal Years 1997–1998 by Topic for Army National Guard

Topic	Finding
Air Emissions Mgt.	<ol style="list-style-type: none"> 1. Noncompliance with state and local regulations. (AE.3.1) (i.e., open burning; inadequate labeling; cold cleaner lids left open; unpermitted discharge) <i>Class 1</i> 2. No or inadequate CFC/Halon annual report. (AE.85.1.G) <i>Class 3</i> 3. Lack of or inappropriate refrigeration recovery and recycling equipment. (AE.90.5) <i>Class 1</i>
Cultural Resources Mgt.	<ol style="list-style-type: none"> 1. No or inadequate historic properties survey/National Register. (CR.5.1) <i>Class 1</i> 2. No or inadequate ICRMP. (CR.5.1.G) <i>Class 1</i> 3. No or inadequate preparation and implementation of an HPP. (CR.1.6.G) <i>Class 3</i>
Hazardous Materials Mgt.	<ol style="list-style-type: none"> 1. Noncompliance with state and local regulations. (HM.3.1) (i.e., inadequate labeling; inadequate flammable/combustible storage; inadequate hazardous materials inventory; visible spills) <i>HS</i> 2. Containers of hazardous materials are not correctly labeled, tagged, or marked. (HM.1.3) <i>HS</i> 3. Noncompliance with other Federal regulations. (HM.2.1) <i>HS</i>
Hazardous Waste Mgt.	<ol style="list-style-type: none"> 1. Inadequate or lack of characterization of wastes. (HW.10.1) <i>Class 1</i> 2. Noncompliance with state and local regulations. (HW.3.1) (i.e., improper disposal of fluorescent light bulbs; uncharacterized waste; inadequate mainte-

Topic	Finding
	<p>nance; disposal of hazardous waste at an unapproved facility; no designated accumulation point) <i>Class 1</i></p> <p>3. No or inadequate written hazardous waste management plan. (HW.1.3.G) <i>Class 3</i></p>
Natural Resources Mgt.	<p>1. Inadequate management of dust, runoff, silt, and erosion debris. (NR.10.9.G) <i>Class 3</i></p> <p>2. Noncompliance with state and local regulations. (NR.3.1) <i>Class 1</i> (i.e., POL spills; inadequate erosion control)</p> <p>3. Lack of or inadequate INRMP. (NR.1.3.G) <i>Class 3</i></p>
Other Environmental Issues: NEPA	<p>1. NEPA not integrated into planning. (O1.5.1) <i>Class 1</i></p> <p>2. No or inadequate implementation of NEPA. (O1.1.3.G) <i>Class 1</i></p>
Other Env. Issues: Noise	<p>1. No or inadequate noise complaint procedure. (O2.1.10.G) <i>Class 3</i></p> <p>2. No or inadequate ICUZ study. (O2.1.3.G) <i>Class 3</i></p> <p>3. No or inadequate ICUZ committee. (O2.1.4.G) <i>Class 3</i></p>
Other Env. Issues: IRP	<p>1. No or inadequate screening for past use of hazardous substances. (O3.1.3.G) <i>Class 3</i></p>
Other Env. Issues: P2	<p>1. No or incomplete master listing of all hazardous substances. (O4.10.1.G) <i>Class 3</i></p> <p>2. Pollution prevention plan inadequate or incomplete. (O4.5.1) <i>Class 1</i></p> <p>3. No designated P2 POC. (O4.1.12.G); No or inadequate budgeting and implementation of hazardous waste minimization and pollution prevention. (O4.10.4.G) <i>Class 3</i></p>
Other Env. Issues: Program Mgt.	<p>1. No or inadequate EQCC. (O5.1.6.G) <i>Class 3</i></p> <p>2. Noncompliance with other Federal regulations. (O5.2.1) <i>Class 1</i></p>

Topic	Finding
Pesticides Mgt.	<ol style="list-style-type: none"> 1. No or inadequate disposal for all excess pesticides. (PM.55.1.G) <i>Class 3</i> 2. Noncompliance with state and local regulations. (PM.3.1) (i.e., uncertified applicator; improper storage) <i>Class 1</i> 3. Government pesticide applicators not certified. (PM.5.1.G) <i>Class 3</i>
POL Mgt.	<ol style="list-style-type: none"> 1. No or inadequate ISCP. (PO.5.3.G) <i>Class 3</i> 2. No or inadequate spill containment and cleanup materials. (PO.20.1) <i>Class 1</i> 3. No "USED OIL" label on containers other than tanks. (PO.65.6) <i>Class 1</i>
Solid Waste Mgt.	<ol style="list-style-type: none"> 1. Noncompliance with state and local regulations. (SO.3.1) (i.e., inadequate maintenance; open dumping; waste tire storage; improper disposal of regulated medical waste) <i>Class 1</i> 2. Inadequate participation in state/local recycling programs. (SO.25.1.G) <i>Class 3</i> 3. Lack of segregation of recyclable materials from solid waste. (SO.10.1) <i>Class 1</i>
Storage Tanks Mgt.	<ol style="list-style-type: none"> 1. No or inadequate secondary containment for bulk storage tanks. (ST.5.1) <i>Class 1</i> 2. Noncompliance with state and local regulations. (ST.3.1) (i.e., unregistered storage tanks; inadequate USTs; inadequate recordkeeping; inadequate spill/overflow protection; no UST closure documentation) <i>Class 1</i> 3. Inadequate maintenance of UST. (ST.95.1) <i>Class 1</i>
Toxic Substances, PCB	<ol style="list-style-type: none"> 1. No ML markings for PCB equipment. (T1.10.2) <i>Class 1</i>
Toxic Substances, Asbestos	<ol style="list-style-type: none"> 1. No or inadequate Installation Asbestos Management Plan. (T2.1.4.G) <i>Class 3</i>

Topic	Finding
	<ol style="list-style-type: none"> 2. No or inadequate asbestos survey. (T2.1.3.G) <i>Class 3</i> 3. Improper disposal of asbestos containing material. (T2.15.1) <i>Class 1</i>
Toxic Substances, Radon	<ol style="list-style-type: none"> 1. Radon measurements not performed. (T3.1.3.G) <i>Class 3</i> 2. No or inadequate measurements of Priority 1 structures. (T3.1.4.G) <i>Class 3</i>
Toxic Substances, LBP	N/A
Wastewater Mgt.	<ol style="list-style-type: none"> 1. Noncompliance with state and local regulations. (WA.3.1) (i.e., unpermitted discharge; no operation and maintenance manual for WWTP; inadequate secondary containment; noncompliance with permit requirements; inadequate maintenance; inadequate stormwater pollution prevention plan) <i>Class 1</i> 2. Introduction of pollutants into POTW/FOTW. (WA.25.2) <i>Class 1</i> 3. No application for industrial activity stormwater permit. (WA.10.3) <i>Class 1</i>
Water Quality Mgt.	<ol style="list-style-type: none"> 1. Noncompliance with state and local regulations. (WQ.3.1) (i.e., improper well closure; well near contamination source) <i>Class 1</i>

Appendix J: Top Three Findings in Fiscal Years 1997–1998 by Topic for the Army National Guard

Topic	Finding FY97	Finding FY98
Air Emissions Mgt.	<ol style="list-style-type: none"> 1. Noncompliance with state and local regulations. (AE.3.1) (i.e., inadequate labeling; open burning) 2. No or inadequate CFC/Halon annual report. (AE.85.1.G) 3. Knowing release of Class I or Class II substance used as a refrigerant. (AE.90.3) 	<ol style="list-style-type: none"> 1. Noncompliance with state and local regulations (AE.3.1) (i.e., open burning; cold cleaner lids left open) 2. No or incomplete quarterly CFC procurement report (AE.85.1.G) 3. No or inadequate emissions inventory (AE.1.3.G)
Cultural Resources Mgt.	<ol style="list-style-type: none"> 1. No or inadequate historic properties survey/National Register. (CR.5.1) 2. No or inadequate ICRMP. (CR.5.1.G) 3. No or inadequate preparation and implementation of an HPP. (CR.1.6.G) 	<ol style="list-style-type: none"> 1. No or inadequate historic properties survey/National Register (CR.5.1); No or inadequate ICRMP (CR.5.1.G); Effects of undertaking on historic properties/National Register not taken into account (CR.5.2)
Hazardous Materials Mgt.	<ol style="list-style-type: none"> 1. Noncompliance with state and local regulations. (HM.3.1) (i.e., no discharge notification placard; improper flammable/combustible storage) 2. Containers of hazardous materials are not correctly labeled, 	<ol style="list-style-type: none"> 1. Noncompliance with state and local regulations (HM.3.1) (i.e., visible spills; inadequate hazardous materials inventory) 2. Noncompliance with other Federal regulations regarding hazardous materials (HM.2.1)

Topic	Finding FY97	Finding FY98
	<p>tagged or marked. (HM.1.3)</p> <p>3. Noncompliance with other Federal regulations. (HM.2.1); Inadequate training in the transportation of hazardous materials. (HM.50.8)</p>	
Hazardous Waste Mgt.	<p>1. Inadequate or lack of characterization of wastes. (HW.10.1)</p> <p>2. Noncompliance with state and local regulations. (HW.3.1) (i.e., uncharacterized waste; inadequate recordkeeping; improper disposal of fluorescent bulbs; hazardous waste disposed to an unapproved facility; improper transportation of hazardous waste)</p> <p>3. No or inadequate written hazardous waste management plan. (HW.1.3.G)</p>	<p>1. Inadequate or lack of characterization of wastes (HW.10.1)</p> <p>2. Noncompliance with state and local regulations (HW.3.1) (i.e., inadequate recordkeeping; uncharacterized waste; no designated accumulation point; incomplete manifests; improper transportation of hazardous wastes)</p> <p>3. Inappropriately operating as a CESQG (HW.15.1)</p>
Natural Resources Mgt.	<p>1. Inadequate management of dust, runoff, silt, and erosion debris. (NR.10.9.G)</p> <p>2. Lack of or inadequate INRMP. (NR.1.3.G)</p> <p>3. Noncompliance with state and local regulations. (NR.3.1) (i.e., no permit obtained; inadequate erosion control)</p>	<p>1. Noncompliance with state and local regulations (NR.3.1) (i.e., visible spills; no permit obtained)</p> <p>2. Inadequate management of dust, runoff, silt, and erosion debris (NR.10.9.G); No or inadequate survey of endangered and threatened species (NR.20.1)</p>
Other Environmental Issues: NEPA	<p>1. NEPA not integrated into planning. (O1.5.1)</p> <p>2. No or inadequate implementation of NEPA. (O1.1.3.G)</p>	<p>1. NEPA not integrated into planning (O1.5.1)</p>
Other	<p>1. No or inadequate noise complaint</p>	N/A

Topic	Finding FY97	Finding FY98
Environmental Issues: Noise	<p>procedure. (O2.1.10.G)</p> <p>2. No or inadequate ICUZ study. (O2.1.3.G)</p> <p>3. No or inadequate ICUZ committee. (O2.1.4.G)</p>	
Other Environmental Issues: IRP	<p>1. No or inadequate screening for past use of hazardous substances. (O3.1.3.G)</p>	<p>1. No or inadequate screening for past use of hazardous substances (O3.1.3.G)</p>
Other Environmental Issues: P2	<p>1. No or incomplete master listing of all hazardous substances. (O4.10.1.G)</p> <p>2. Pollution prevention plan inadequate or incomplete. (O4.5.1)</p> <p>3. No designated P2 POC. (O4.1.12.G); No or inadequate budgeting and implementation of hazardous waste minimization and pollution prevention. (O4.10.4.G)</p>	<p>1. Pollution prevention plan inadequate or incomplete (O4.5.1); No or incomplete master listing of all hazardous substances (O4.10.1.G)</p>
Other Environmental Issues: Program Mgt.	<p>1. No or inadequate EQCC. (O5.1.6.G)</p>	<p>1. Noncompliance with other Federal regulations regarding program management (O5.2.1)</p>
Pesticides Mgt.	<p>1. No or inadequate disposal for all excess pesticides. (PM.55.1.G)</p> <p>2. Noncompliance with state and local regulations. (PM.3.1) (i.e., uncertified applicator; improper storage); Government pesticide applicators not certified. (PM.5.1.G)</p>	<p>1. No or inadequate Installation Pest Management Plan (PM.1.4.G)</p> <p>2. Noncompliance with state and local regulations (PM.3.1) (i.e., improper storage)</p>
POL Mgt.	<p>1. Lack of or inadequate spill con-</p>	<p>1. No copy of SPCC (PO.5.1)</p>

Topic	Finding FY97	Finding FY98
	<p>ainment and cleanup materials. (PO.20.1); No or inadequate ISCP. (PO.5.3.G)</p> <p>2. No SPCC. (PO.5.1)</p>	<p>2. No or inadequate ISCP (PO.5.3.G)</p> <p>3. SPCC plan inadequate (PO.5.2); No "USED OIL" label on containers other than tanks (PO.65.6)</p>
Solid Waste Mgt.	<p>1. Nonparticipation in state/local recycling programs. (SO.25.1.G)</p> <p>2. Noncompliance with state and local regulations. (SO.3.1) (i.e., open burning; inadequate maintenance; waste tire storage)</p> <p>3. Inadequate segregation of recyclable materials from solid waste. (SO.10.1)</p>	<p>1. Noncompliance with state and local regulations (SO.3.1) (i.e., improper management of regulated medical waste; open dumping)</p> <p>2. Nonparticipation in state/local recycling programs (SO.25.1.G)</p> <p>3. Open dumping is practiced at the facility (SO.35.20)</p>
Storage Tanks Mgt.	<p>1. No or inadequate secondary containment for bulk storage tanks. (ST.5.1)</p> <p>2. Noncompliance with state and local regulations. (ST.3.1) (i.e., unregistered storage tanks; improper UST closure; inadequate inspection)</p> <p>3. Inadequate maintenance of UST. (ST.95.1)</p>	<p>1. Noncompliance with state and local regulations (ST.3.1) (i.e., unregistered storage tanks; inadequate spill/overflow protection; inadequate USTs; improper closure of UST)</p> <p>2. (No or inadequate secondary containment for bulk storage tanks ST.5.1)</p> <p>3. Substandard USTs not upgraded, closed, or removed (ST.25.1)</p>
Toxic Substances, PCB	<p>1. No ML markings for PCB equipment. (T1.10.2)</p>	N/A
Toxic Substances, Asbestos	<p>1. No or incomplete Installation Asbestos Management Plan. (T2.1.4.G)</p> <p>2. No or incomplete asbestos survey. (T2.1.3.G)</p> <p>3. Improper disposal of asbestos containing material. (T2.15.1)</p>	<p>1. No or inadequate Installation Asbestos Management Plan (T2.1.4.G)</p> <p>2. No or incomplete asbestos survey (T2.1.3.G)</p>

Topic	Finding FY97	Finding FY98
Toxic Substances, Radon	<ol style="list-style-type: none"> 1. Radon measurements not performed. (T3.1.3.G) 2. No or inadequate measurements of Priority 1 structures. (T3.1.4.G) 	N/A
Toxic Substances, LBP	N/A	N/A
Wastewater Mgt.	<ol style="list-style-type: none"> 1. Noncompliance with state and local regulations. (WA.3.1) (i.e., unpermitted discharge; inadequate secondary containment; no grease trap; inadequate maintenance; no stormwater pollution prevention plan) 2. Introduction of pollutants into POTW/FOTW. (WA.25.2) 3. No application for industrial activity stormwater permit. (WA.10.3) 	<ol style="list-style-type: none"> 1. Noncompliance with state and local regulations (WA.3.1) (i.e., inadequate stormwater pollution prevention plan; unpermitted discharge; noncompliance with permit requirements; no grease traps; improper closure of monitoring wells) 2. Introduction of pollutants into POTW/FOTW (WA.25.2) 3. No or inadequate notification to POTW/FOTW of discharges that could cause problems (WA.25.3)
Water Quality Mgt.	<ol style="list-style-type: none"> 1. Noncompliance with state and local regulations. (WQ.3.1) (i.e., inadequate recordkeeping; improper well closure) 	<ol style="list-style-type: none"> 1. Noncompliance with state and local regulations (WQ.3.1) (i.e., improper well closure; well near contamination source)

Appendix K: Positive and False Positive Findings

Organization	FY91 P/FP	FY92 P/FP	FY93 P/FP	FY94 P/FP	FY95 P/FP	FY96 P/FP	FY97 P/FP	FY98 P/FP	FY99 P/FP	FY00 P/FP
Active Army	No data	No data	56/17	85/44	120/25	17/18	4/4	27/67	15/11	
Army Reserve	0/3	10/60	28/157	67/50	1/0	12/16	35/0	4/0	No data	No data
Army National Guard	No data	0/0	0/0	No data	No data					

Active Army Major Command	FY94 P/FP	FY95 P/FP	FY96 P/FP	FY97 P/FP	FY98 P/FP	FY99 P/FP	FY00 P/FP
AMC	18/7	21/7	6/4	1/2	No data	2/4	No data
TRADOC	18/4	27/16	34/3	4/2	4/4	8/29	5/2
FORSCOM	20/6	28/9	43/16	10/12	No data	6/8	8/4
MDW	No data	1/9	14/0	No data	No data	2/9	No data
MEDCOM	No data	8/3	1/0	No data	No data	No data	2/2
USARPAC	No data	No data	13/4	No data	No data	5/12	No data
USMA	No data	No data	8/0	No data	No data	4/4	No data

Appendix L: Positive Versus Negative Findings

Organization	FY91		FY92		FY93		FY94		FY95		FY96		FY97		FY98		FY99		FY00	
	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-
Active Army	No data	No data	No data	No data	No data	No data	73	2122	129	2540	145	1849	35	914	8	57	94	1086	26	413
Army Reserve	3	55	70	910	185	1789	117	805	1	36	28	794	35	627	4	178	No data	No data	No data	No data
Army National Guard	No data	No data	No data	No data	No data	No data	No	No	No	No	No	No	No	No	0	1541	0	386	No data	No data
Totals	3	55	70	910	185	1789	190	2927	130	2576	173	2643	70	3082	12	621	94	1086	26	413

Organization	FY94		FY95		FY96		FY97		FY98		FY99		FY00	
	+	--	+	--	+	--	+	--	+	--	+	--	+	--
AMC	25	627	28	45	10	320	3	222	No data	No data	6	130	No data	No data
TRADOC	34	447	43	849	37	327	6	238	8	50	37	309	7	64
FORSCOM	26	1049	37	810	59	518	22	367	No data	No data	14	90	12	189
MDW	No data	No data	10	320	14	192	No data	No data	No data	No data	11	171	No data	No data
MEDCOM	No data	No data	11	130	1	130	No data	No data	No data	No data	No data	No data	No data	No data
USARPAC	No data	No data	No data	No data	17	201	No data	No data	No data	No data	17	272	No data	No data
USMA	No data	No data	No data	No data	8	115	No data	No data	No data	No data	8	59	No data	No data
TOTALS	73	2123	129	2540	146	1803	31	827	8	50	93	1031	23	327

Appendix M: Positive Versus Negative Findings By Topic for the Active Army

This chart indicates the areas where the predominance of noncompliance findings occur and how that can change from FY to FY (of positive/of negative). Positive Findings include all findings originally classed as Positive plus those reclassified as False Positives.

The Active Army data include AMC, TRADOC, FORSCOM, MDW, MEDCOM, USARPAC, and USMA.

All Active Army

Topic	FY94	FY95	FY96	FY97	FY98	FY99	FY00
	P/-	P/-	P/-	P/-	P/-	P/-	P/-
Air Emissions	1/51	13/213	10/95	1/48	0/2	5/73	1/26
Cultural Resources	2/53	6/84	15/86	3/38	1/0	7/52	7/52
Hazardous materials	8/178	14/396	8/236	4/72	1/8	3/129	0/1
Hazardous Waste	13/458	10/313	4/173	1/92	0/6	1/119	3/65
Natural Resources	2/78	9/81	15/50	3/39	1/2	9/34	2/19
Other Env Issues, NEPA	3/54	8/69	4/29	1/37	1/0	7/27	2/7
Other Env. Issues, Noise	0/24	10/46	13/33	2/10	No data	7/13	2/9

Topic	FY94	FY95	FY96	FY97	FY98	FY99	FY00
	P/-						
Other Env. Issues, IRP	2/3	1/7	4/24	2/6	No data	1/5	0/1
Other Env. Issues, P2	1/7	2/9	8/10	6/12	1/1	7/18	0/1
Other Env. Issues, Program Mgt.	10/38	13/64	18/68	5/16	1/0	16/37	3/20
Pesticides	3/79	4/206	4/173	0/133	1/5	5/104	1/52
POL Mgt.	10/320	3/182	3/152	0/78	0/14	1/83	1/31
Solid Waste	6/100	11/162	11/133	4/47	1/3	5/73	2/21
Storage Tanks	2/335	2/126	6/108	0/49	0/1	7/40	0/25
Toxic Substances, PCB	2/36	1/60	1/26	0/20	No data	0/18	0/3
Toxic Substances, Asbestos	4/84	2/61	0/66	0/28	0/2	3/31	0/10
Toxic Substances, Radon	0/5	0/7	0/7	0/3	No data	0/8	0/2
Toxic Substances, LBP	0/0	0/5	1/14	1/11	No data	0/13	1/3
Wastewater	2/159	10/259	3/194	1/92	0/8	2/109	0/41
Water Quality	2/60	10/190	17/172	1/85	0/5	2/107	3/51

AMC

Topic	FY94	FY95	FY96	FY97	FY98	FY99	FY00
	P/-						
Air Emissions	0/28	4/29	1/13	1/9	No data	0/10	No data
Cultural Resources	1/40	1/32	0/8	0/7	No data	0/9	No data
Hazardous Materials	3/32	2/21	3/16	0/16	No data	1/6	No data
Hazardous Waste	1/90	5/57	0/27	0/22	No data	0/11	No data
Natural Resources	2/41	1/20	0/8	0/6	No data	1/5	No data
Other Env Issues, NEPA	2/50	3/33	0/9	0/6	No data	1/8	No data
Other Env. Issues, Noise	0/14	1/9	1/0	No data	No data	No data	No data
Other Env Issues, IRP	2/1	0/0	1/6	0/2	No data	No data	No data
Other Env Issues, P2	0/4	0/2	0/2	0/6	No data	No data	No data
Other Env Issues, Program Mgt.	7/21	4/10	1/8	2/1	No data	No data	No data
Pesticides	2/53	0/36	0/33	0/40	No data	0/8	No data
POL Mgt.	0/23	0/34	0/34	0/15	No data	0/12	No data
Solid Waste	2/20	1/20	1/13	0/3	No data	1/5	No data
Storage Tanks	0/47	1/25	2/30	0/19	No data	1/6	No data
Toxic Substances, PCB	1/26	1/28	0/13	0/9	No data	0/2	No data
Toxic Substances, Asbestos	1/43	2/17	0/31	0/14	No data	0/9	No data

Topic	FY94	FY95	FY96	FY97	FY98	FY99	FY00
	P/-	P/-	P/-	P/-	P/-	P/-	P/-
Toxic Substances, Radon	0/4	0/1	0/0	0/2	No data	No data	No data
Toxic Substances, LBP	0/0	0/0	0/1	0/1	No data	0/1	No data
Wastewater	0/47	1/52	0/40	0/26	No data	0/23	No data
Water Quality	1/43	1/25	0/25	0/18	No data	0/12	No data
TOTALS	25/627	28/451	10/320	3/222	No data	5/115	No data

TRADOC

Topic	FY94	FY95	FY96	FY97	FY98	FY99	FY00
	P/-						
Air Emissions	1/8	6/96	4/6	0/14	0/2	2/18	0/6
Cultural Resources	0/5	3/20	3/7	0/4	1/0	4/5	1/0
Hazardous Materials	5/92	6/138	1/58	2/14	1/7	4/44	No data
Hazardous Waste	7/116	2/100	1/21	0/31	0/4	1/47	1/11
Natural Resources	0/17	2/23	5/12	1/6	1/2	4/4	No data
Other Env. Issues, NEPA	1/2	1/14	2/6	1/9	1/0	1/9	1/0
Other Env. Issues, Noise	0/4	5/10	3/9	0/4	0/0	2/2	No data
Other Env. Issues, IRP	0/0	0/0	2/4	0/1	0/0	1/0	0/1
Other Env. Issues, P2	0/0	2/2	5/1	1/1	1/1	2/3	0/1
Other Env. Issues, Program Mgt.	0/5	6/21	3/12	0/6	1/0	5/4	1/0
Pesticides	0/7	2/63	0/37	0/27	1/4	3/29	1/2
POL Mgt.	2/52	1/65	1/26	0/23	0/12	0/23	0/8
Solid Waste	0/30	1/74	1/22	1/19	1/3	3/18	1/1
Storage Tanks	1/64	1/31	2/19	0/13	0/1	2/14	0/3
Toxic Substances, PCB	1/3	0/15	0/5	0/7	0/0	0/9	0/1
Toxic Substances, Asbestos	3/8	0/24	0/6	0/3	0/2	0/8	0/2

Topic	FY94	FY95	FY96	FY97	FY98	FY99	FY00
	P/-	P/-	P/-	P/-	P/-	P/-	P/-
Toxic Substances, Radon	0/0	0/1	0/0	0/0	0/0	No data	No data
Toxic Substances, LBP	0/0	0/2	0/2	0/2	0/0	0/4	0/1
Wastewater	0/22	4/90	2/35	0/24	0/7	1/43	0/7
Water Quality	1/13	1/60	2/39	0/30	0/5	2/31	1/11
TOTALS	22/447	43/849	37/327	6/238	7/50	37/315	7/55

FORSCOM

Topic	FY94	FY95	FY96	FY97	FY98	FY99	FY00
	P/-						
Air Emissions	0/15	2/68	2/37	0/16	No data	1/5	0/8
Cultural Resources	1/9	1/23	12/38	3/18	No data	1/4	2/9
Hazardous Materials	0/54	5/147	1/46	2/34	No data	0/6	No data
Hazardous Waste	5/252	1/105	1/57	1/33	No data	0/10	2/35
Natural Resources	0/20	6/28	9/12	2/23	No data	1/6	2/10
Other Env. Issues, NEPA	0/3	0/17	0/4	0/21	No data	3/3	1/5
Other Env. Issues, Noise	0/6	4/21	9/15	2/6	No data	2/3	1/7
Other Env. Issues, IRP	0/2	1/7	0/10	2/3	No data	No data	No data
Other Env. Issues, P2	1/3	0/5	2/5	4/5	No data	1/0	0/4
Other Env. Issues, Program Mgt.	3/12	1/18	7/12	2/7	No data	2/3	1/9
Pesticides	1/19	1/51	4.46	0/57	No data	0/9	0/28
POL Mgt.	8/245	2/49	1/42	0/32	No data	1/4	1/10
Solid Waste	4/50	7/48	4/43	2/21	No data	0/10	1/12
Storage Tanks	1/224	0/46	0/28	0/14	No data	1/3	0/12
Toxic Substances, PCB	0/7	0/15	0/6	0/2	No data	No data	0/2
Toxic Substances, Asbestos	0/33	0/11	0/13	0/7	No data	1/0	0/3

Topic	FY94	FY95	FY96	FY97	FY98	FY99	FY00
	P/-	P/-	P/-	P/-	P/-	P/-	P/-
Toxic Substances, Radon	0/1	0/3	0/0	0/1	No data	0/3	No data
Toxic Substances, LBP	0/0	0/1	0/4	0/5	No data	0/2	No data
Wastewater	2/90	3/86	2/56	1/32	No data	0/10	0/15
Water Quality	0/4	3/61	5/44	1/30	No data	0/10	1/20
TOTALS	26/1049	38/791	67/483	22/367	No data	13/91	12/189

MDW

Topic	FY95	FY96	FY99*
	P/-	P/-	P/-
Air Emissions	1/17	2/9	0/16
Cultural Resources	1/4	0/11	1/12
Hazardous Materials	1/71	0/40	0/16
Hazardous Waste	0/38	0/23	0/24
Natural Resources	0/6	1/5	1/4
Other Env. Issues, NEPA	1/4	2/0	No data
Other Env. Issues, Noise	0/6	0/0	No data
Other Env. Issues, IRP	0/0	0/1	0/1
Other Env. Issues, P2	0/0	0/1	1/2
Other Env. Issues, Program Mgt.	2/13	2/12	3/9
Pesticides	1/42	0/16	1/21
POL Mgt.	0/24	0/11	0/19
Solid Waste	0/14	3/17	1/8
Storage Tanks	0/20	0/4	1/2
Toxic Substances, PCB	0/2	0/1	0/4
Toxic Substances, Asbestos	0/6	0/5	1/2
Toxic Substances, Radon	0/1	0/0	No data
Toxic Substances, LBP	0/1	1/1	No data
Wastewater	0/22	0/14	1/18
Water Quality	3/29	3/21	0/13
TOTALS	18/421	14/193	11/171

*There are no data for FY97 or FY98.

MEDCOM

Topic	FY95	FY96	FY99*
	P/-	P/-	P/-
Air Emissions	0/3	0/10	1/1
Cultural Resources	0/5	0/4	1/4
Hazardous materials	0/19	0/29	0/1
Hazardous Waste	2/13	0/6	0/5
Natural Resources	0/4	0/4	0/4
Other Env. Issues, NEPA	3/1	0/2	No data
Other Env. Issues, Noise	0/0	0/0	No data
Other Env. Issues, IRP	0/0	0/0	No data
Other Env. Issues, P2	0/0	0/0	1/2
Other Env. Issues, Program Mgt.	0/2	0/4	0/4
Pesticides	0/14	0/17	0/14
POL Mgt.	0/10	0/10	0/6
Solid Waste	2/6	0/7	0/4
Storage Tanks	0/4	0/5	0/4
Toxic Substances, PCB	0/0	0/1	No data
Toxic Substances, Asbestos	0/3	0/2	0/5
Toxic Substances, Radon	0/1	0/2	0/2
Toxic Substances, LBP	0/1	0/0	1/1
Wastewater	2/9	0/19	0/8
Water Quality	2/15	1/8	0/9
TOTALS	11/110	1/130	4/74

*There are no data for FY97 or FY98.

USARPAC

Topic	FY96	FY99*
	P/-	P/-
Air Emissions	0/7	1/18
Cultural Resources	0/5	1/12
Hazardous materials	3/26	1/28
Hazardous Waste	2/19	1/21
Natural Resources	0/3	1/12
Other Env Issues, NEPA	0/5	1/6
Other Env. Issues, Noise	0/8	3/7
Other Env Issues, IRP	1/1	0/3
Other Env Issues, P2	1/1	2/9
Other Env Issues, Program Mgt.	1/11	3/13
Pesticides	0/14	0/29
POL Mgt.	0/14	0/19
Solid Waste	2/20	0/17
Storage Tanks	2/15	2/15
Toxic Substances, PCB	1/0	0/2
Toxic Substances, Asbestos	0/6	1/9
Toxic Substances, Radon	0/3	0/3
Toxic Substances, LBP	0/3	0/4
Wastewater	0/18	0/17
Water Quality	4/22	0/29
TOTALS	17/212	17/273

*There are no data for FY97 or FY98.

USMA

Topic	FY96	FY99
	P/-	P/-
Air Emissions	1/11	1/2
Cultural Resources	0/6	0/3
Hazardous Materials	0/15	2/16
Hazardous Waste	0/16	0/2
Natural Resources	0/3	1/1
Other Env. Issues, NEPA	0/1	0/1
Other Env. Issues, Noise	0/0	No data
Other Env. Issues, IRP	0/2	No data
Other Env Issues, P2	0/0	No data
Other Env. Issues, Program Mgt.	3/6	2/3
Pesticides	0/5	1/4
POL Mgt.	1/13	0/2
Solid Waste	1/10	0/9
Storage Tanks	0/4	No data
Toxic Substances, PCB	0/0	0/1
Toxic Substances, Asbestos	0/2	0/2
Toxic Substances, Radon	0/1	0/1
Toxic Substances, LBP	0/3	0/1
Wastewater	0/9	0/5
Water Quality	2/8	1/6
TOTALS	8/115	8/59

Appendix N: Positive Versus Negative Findings By Topic for the Army Reserve

This chart indicates the areas where the predominance of noncompliance findings occur and how that can change from FY to FY (of positive/negative). Positive Findings include all findings originally classed as Positive plus those reclassified as False Positives.

Topic	FY91 P/-	FY92 P/-	FY93 P/-	FY94 P/-	FY95 P/-	FY96 P/-	FY97 P/-	FY98 P/-
Air Emissions	0/9	1/57	7/96	3/50	0/2	0/29	2/23	0/13
Cultural Resources	0/0	3/3	3/35	5/14	0/2	0/6	0/4	1/8
Hazardous Materials	0/8	16/162	35/335	18/146	0/11	13/252	17/262	0/22
Hazardous Waste	2/12	5/183	22/247	14/97	0/4	4/94	4/69	0/16
Natural Resources	0/0	3/9	4/19	7/10	0/1	0/4	1/2	0/7

Topic	FY91 P/-	FY92 P/-	FY93 P/-	FY94 P/-	FY95 P/-	FY96 P/-	FY97 P/-	FY98 P/-
Other Environmental Issues, NEPA	0/0	4/15	4/33	2/15	0/0	0/8	0/2	0/1
Other Environmental Issues, Noise	0/2	0/35	3/71	4/40	0/1	0/34	0/20	2/8
Other Environmental Issues, IRP	0/0	2/11	2/29	0/13	0/0	0/7	0/4	1/2
Other Environmental Issues, P2	0/2	6/27	4/72	2/28	0/1	0/29	1/13	0/2
Other Environmental Issues, Program Mgt.	0/4	4/54	9/100	3/45	0/0	3/35	0/13	0/11
Pesticides	0/0	2/14	1/19	2/10	0/1	0/6	0/3	0/16
POL Mgt.	0/1	7/72	18/181	14/84	0/5	3/97	5/60	0/9
Solid Waste	1/4	10/40	26/92	11/49	1/0	3/31	2/34	0/8

Topic	FY91 P/-	FY92 P/-	FY93 P/-	FY94 P/-	FY95 P/-	FY96 P/-	FY97 P/-	FY98 P/-
Storage Tanks	0/3	2/33	4/93	5/23	0/0	0/24	2/11	0/6
Toxic Substances, PCB	0/1	2/15	1/38	3/19	0/2	1/19	1/8	0/0
Toxic Substances, Asbestos	0/4	0/66	12/136	7/54	0/2	0/41	0/35	0/5
Toxic Substances, Radon	0/1	0/46	13/75	12/31	0/0	0/35	0/18	0/3
Toxic Substances, LBP	0/0	0/0	0/0	0/1	0/0	0/0	0/1	0/1
Wastewater	0/3	1/56	6/96	4/63	0/4	1/40	0/39	0/15
Water Quality	0/0	3/17	11/27	1/14	0/0	0/4	0/6	0/24
TOTALS	3/54	71/915	185/1794	117/806	1/36	28/795	35/627	4/177

Appendix O: Positive Versus Negative Findings By Topic for the Army National Guard

This chart indicates the areas where the predominance of noncompliance findings occur and how that can change from FY to FY (of positive/of negative). Positive Findings include all findings originally classed as Positive plus those reclassified as False Positives.

Topic	FY97	FY98
	P/-	P/-
Air Emissions	0/34	0/11
Cultural Resources	0/15	0/3
Hazardous Materials	0/14	0/5
Hazardous Waste	0/431	0/105
Natural Resources	0/44	0/10
Other Env. Issues, NEPA	0/57	0/8
Other Env. Issues, Noise	0/16	0/0
Other Env. Issues, IRP	0/19	0/1
Other Env. Issues, P2	0/8	0/1
Other Env. Issues, Program Mgt.	0/3	0/1
Pesticides	0/34	0/2
POL Mgt.	0/447	0/82
Solid Waste	0/67	0/17
Storage Tanks	0/150	0/82

Topic	FY97	FY98
	P/-	P/-
Toxic Substances, PCB	0/1	0/0
Toxic Substances, Asbestos	0/27	0/10
Toxic Substances, Radon	0/4	0/0
Toxic Substances, LBP	0/0	0/0
Wastewater	0/166	0/46
Water Quality	0/4	0/2
TOTALS	0/1541	0/386

Appendix P: Questionable Findings

Excluding positives, total number of questionable findings by ECAS Program.

Organization	FY91	FY92	FY93	FY94	FY95	FY96	FY97	FY98	FY99	FY00
Active Army	No data	No data	No data	196	161	69	94	10	154	53
Army Reserve	5	133	264	111	1	49	12	No data	No data	No data
Army National Guard	No data	No data	No data	No data	No data	0	3	No data	No data	No data
TOTALs	5	133	264	307	162	118	106	16	154	53

Excluding positives, number of questionable findings for Active Army Major Commands.

Active Army Major Command	FY94	FY95	FY96	FY97	FY98	FY99	FY00
AMC	36	16	11	19	0	15	No data
TRADOC	38	57	4	12	6	62	5
FORSCOM	100	39	19	40	0	15	34
MDW	No data	2	No data	No data	No data	19	No data
MEDCOM	No data	1	2	No data	No data	No data	5
USARPAC	No data	No data	5	No data	No data	28	No data
USMA	No data	No data	1	No data	No data	9	No data

Questionable findings by type for ECAS programs.

Organization	Q1	Q2	Q3	Q4	Q5
Active Army	18	168	327	185	48
Army Reserve	40	89	104	294	66
Army National Guard	0	0	3	0	0
TOTALs	58	257	431	479	114

Questionable findings by type for Active Army Major Commands.

Active Army Major Command	Q1	Q2	Q3	Q4	Q5
AMC	2	34	48	24	12
TRADOC	0	77	65	61	18
FORSCOM	16	53	166	53	9
MDW	0	0	10	18	2
MEDCOM	0	0	3	5	2
USARPAC	0	4	14	16	2
USMA	0	0	4	4	1

Appendix Q: Citations of Negative Findings

Management Practice (MP) versus AR/DOD versus Regulatory Negative Findings by ECAS Program.

FY	Active Army	Army Reserve	Army Guard
10/90 - 9/91 (FY91)	No data	6 MPs	No data
	No data	12 AR/DOD	No data
	No data	1 Regulatory	No data
10/91 - 9/92 (FY92)	No data	120 MPs	No data
	No data	203 AR/DOD	No data
	No data	52 Regulatory	No data
10/92 - 9/93 (FY93)	No data	176 MPs	No data
	No data	440 AR/DOD	No data
	No data	143 Regulatory	No data
10/93 - 9/94 (FY94)	217 MPs	163 MPs	No data
	575 AR/DOD	475 AR/DOD	No data
	1481 Regulatory	405 Regulatory	No data
10/94 - 9/95 (FY95)	256 MPs	7 MPs	No data
	576 AR/DOD	9 AR/DOD	No data
	1769 Regulatory	21 Regulatory	No data
10/95 - 9/96 (FY96)	246 MPs	183 MPs	No data
	494 AR/DOD	272 AR/DOD	No data
	1231 Regulatory	349 Regulatory	No data
10/96 - 9/97 (FY97)	95 MPs	35 MPs	0 MPs

FY	Active Army	Army Reserve	Army Guard
	296 AR/DOD	91 AR/DOD	145 AR/DOD
	563 Regulatory	31 Regulatory	145 Regulatory
10/97-9/98 (FY98)	7 MPs	18 MPs	1 MPs
	17 AR/DOD	43 AR/DOD	14 AR/DOD
	40 Regulatory	30 Regulatory	50 Regulatory
10/98 - 9/99 (FY99)	170 MPs	No data	No data
	341 AR/DOD	No data	No data
	640 Regulatory	No data	No data
10.99 - 9/00 (FY00)	57 MPs	No data	No data
	128 AR/DOD	No data	No data
	248 Regulatory	No data	No data

CERL Distribution

Chief of Engineers
ATTN: CEHEC-IM-LH (2)

Engineer Research and Development Center (Libraries)
ATTN: ERDC, Vicksburg, MS
ATTN: Cold Regions Research, Hanover, NH
ATTN: Topographic Engineering Center, Alexandria, VA

Defense Tech Info Center 22304
ATTN: DTIC-O

6
3/01

REPORT DOCUMENTATION PAGE

Form Approved
OMB No. 0704-0188

Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing this collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing burden to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports (0704-0188), 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. PLEASE DO NOT RETURN YOUR FORM TO THE ABOVE ADDRESS.

1. REPORT DATE (DD-MM-YYYY) 03-2001		2. REPORT TYPE Final		3. DATES COVERED (From - To)	
4. TITLE AND SUBTITLE Environmental Compliance Assessment Data: Analysis of Data Generated by the Army's ECAS Program				5a. CONTRACT NUMBER	
				5b. GRANT NUMBER	
				5c. PROGRAM ELEMENT NUMBER	
6. AUTHOR(S) Donna J. Schell				5d. PROJECT NUMBER 622720A896	
				5e. TASK NUMBER	
				5f. WORK UNIT NUMBER T20	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) U.S. Army Engineer Research and Development Center (ERDC) Construction Engineering Research Laboratory (CERL) P.O. Box 9005 Champaign, IL 61826-9005				8. PERFORMING ORGANIZATION REPORT NUMBER ERDC/CERL TR-01-34	
9. SPONSORING / MONITORING AGENCY NAME(S) AND ADDRESS(ES) U.S. Army Corps of Engineers 441 G Street, NW Washington, DC 20314-1000				10. SPONSOR/MONITOR'S ACRONYM(S)	
				11. SPONSOR/MONITOR'S REPORT NUMBER(S)	
12. DISTRIBUTION / AVAILABILITY STATEMENT Approved for public release; distribution is unlimited.					
13. SUPPLEMENTARY NOTES Copies are available from the National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161.					
14. ABSTRACT The Active Army, Army Reserve, and Army National Guard have been conducting environmental compliance assessments since the late 1980s under the Environmental Compliance Assessment System (ECAS). No analysis of the data generated to date had been done until the project reported here. This report summarizes the methodology used for an analysis of the data and the results of that analysis.					
15. SUBJECT TERMS Environmental Compliance Assessment System (ECAS) Environmental Management					
16. SECURITY CLASSIFICATION OF: a. REPORT Unclassified			17. LIMITATION OF ABSTRACT SAR	18. NUMBER OF PAGES 172	19a. NAME OF RESPONSIBLE PERSON Donna J. Schell
b. ABSTRACT Unclassified					19b. TELEPHONE NUMBER (include area code) (217) 398-5544
c. THIS PAGE Unclassified					